



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois/62764

January 3, 2003

SUBJECT: FAI Route 57
Project IM-057-1(191)013
Section 77-(1,2)RS-2
Pulaski County
Item No. 19, 1/17/03 Letting

TO PROSPECTIVE BIDDERS:

In accordance with your request, we have sent you plans and a proposal for the subject improvement.

Enclosed herewith is one copy each of the following described material:

1. Revised pages 6 and 7 of the Schedule of Prices.
2. Revised sheets 6, 11, 24 and 53 of the Plans.

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal. Bidders using computer generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

If proposal sheets are printed back to back, bidders are cautioned to exercise care when inserting revised and/or added special provisions into their proposals.

Please call 217/782-7806 if any of the above described material is not included in this transmittal.

Very truly yours,

Ted B. Walschleger, P. E.
Engineer of Project Development
and Implementation

If you plan to submit a bid directly to the Department of Transportation

PREQUALIFICATION

Any contractor who desires to become pre-qualified to bid on work advertised by IDOT must submit the properly completed pre-qualification forms to the Bureau of Construction no later than 4:30 p.m. prevailing time twenty-one days prior to the letting of interest. This pre-qualification requirement applies to first time contractors, contractors renewing expired ratings, contractors maintaining continuous pre-qualification or contractors requesting revised ratings. To be eligible to bid, existing pre-qualification ratings must be effective through the date of letting.

REQUESTS FOR AUTHORIZATION TO BID

Contractors wanting to bid on items included in a particular letting must submit the properly completed "Request for Proposal Forms and Plans & Request for Authorization to Bid" (BDE 124) and the ORIGINAL "Affidavit of Availability" (BC 57) to the proper office no later than 4:30 p.m. prevailing time, three (3) days prior to the letting date.

WHO CAN BID ?

Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Proposal Forms and Plans" he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial.

ABOUT AUTHORIZATION TO BID: Firms that have not received an authorization form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

ABOUT SUBMITTING BIDS: It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	Call
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of plans and proposals	217/782-7806

ADDENDUMS TO THE PROPOSAL FORMS

Planholders should verify that they have received and incorporated the revisions prior to submitting their bid. If plans/proposals were requested prior to the date of the addendum, an addendum package should have been mailed to the planholder. If plans/proposals were ordered after the date of the addendum, the plans/proposal package should already include all revisions and an identifying addendum sheet immediately after the proposal cover sheet. Failure by the bidder to include an addendum could result in a bid being rejected as irregular. If a planholder has not received an addendum within 5 days after the addendum date noted, they should call 217-782-7806.

RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting January 17, 2003

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL
(See instructions inside front cover)

NOTICE TO PROSPECTIVE BIDDERS

This proposal can be used for bidding purposes
by only those companies that request and receive
written AUTHORIZATION TO BID from IDOT's
Central Bureau of Construction.
(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

**Notice To Bidders,
Specifications,
Proposal, Contract
and Contract Bond**



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 98714
PULASKI County
Section 77-(1,2)RS-2
Project IM-571(191)13
Route FAI 57
District 9 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

- ☐ A Bid Bond is included.
- ☐ A Cashier's Check or a Certified Check is included

Prepared by

F

Checked by

(Printed by authority of the State of Illinois)

INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond required for Prime Contractors to submit a bid after written **Authorization to Bid** has been issued by IDOT's Central Bureau of Construction.

HOW MANY PROPOSALS SHOULD PROSPECTIVE BIDDERS REQUEST?: Prospective bidders should, prior to submitting their initial request for plans and proposals, determine their needs and request the total number of plans and proposals needed for each item requested. There will be a nonrefundable charge of \$15 for each set of plans and specifications issued.

WHO CAN BID?: Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction. To request authorization, a potential bidder must complete and submit Part B of the Request for Proposal Forms and Plans & Request for Authorization to Bid form (BDE 124) and submit an original Affidavit of Availability (BC 57).

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Proposal Forms and Plans" he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Proposal Denial and/or Authorization Form**, they should contact the Central Bureau of Construction in advance of the letting date.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
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Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of plans and proposals	217/782-7806

RETURN WITH BID



**Illinois Department
of Transportation**

PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

for the improvement identified and advertised for bids in the Invitation for Bids as:

**Contract No. 98714
PULASKI County
Section 77-(1,2)RS-2
Project IM-571(191)13
Route FAI 57
District 9 Construction Funds**

On FAI Route 57 from north of the Perks Road overpass and extending southerly 7.75 miles to east of Pulaski the improvement will consist of pavement patching, bituminous surface removal, 6 ft and variable width pavement removal and the replacement with bituminous base course 2 @ 24 ft width bituminous concrete resurfacing, 4 ft and 10 ft width bituminous shoulders, 4 ft and 2 ft width aggregate shoulders, the resurfacing of the Ullin interchange ramps and the rehabilitation of six bridges.

2. The undersigned bidder will furnish all labor, material and equipment to complete the above described project in a good and workmanlike manner as provided in the contract documents provided by the Department of Transportation. This proposal will become part of the contract and the terms and conditions contained in the contract documents shall govern performance and payments.

RETURN WITH BID

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully examined the proposal, plans, specifications, form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he/she waives all right to plead any misunderstanding regarding the same.
4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned further agrees to execute a contract for this work and present the same to the department within fifteen (15) days after the contract has been mailed to him/her. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen (15) days after the contract has been mailed to him/her contract bond satisfactory to and in the form prescribed by the Department of Transportation, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.
5. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

<u>Amount of Bid</u>			<u>Proposal Guaranty</u>	<u>Amount of Bid</u>			<u>Proposal Guaranty</u>
Up to		\$5,000	\$150	\$2,000,000	to	\$3,000,000	\$100,000
\$5,000	to	\$10,000	\$300	\$3,000,000	to	\$5,000,000	\$150,000
\$10,000	to	\$50,000	\$1,000	\$5,000,000	to	\$7,500,000	\$250,000
\$50,000	to	\$100,000	\$3,000	\$7,500,000	to	\$10,000,000	\$400,000
\$100,000	to	\$150,000	\$5,000	\$10,000,000	to	\$15,000,000	\$500,000
\$150,000	to	\$250,000	\$7,500	\$15,000,000	to	\$20,000,000	\$600,000
\$250,000	to	\$500,000	\$12,500	\$20,000,000	to	\$25,000,000	\$700,000
\$500,000	to	\$1,000,000	\$25,000	\$25,000,000	to	\$30,000,000	\$800,000
\$1,000,000	to	\$1,500,000	\$50,000	\$30,000,000	to	\$35,000,000	\$900,000
\$1,500,000	to	\$2,000,000	\$75,000	over		\$35,000,000	\$1,000,000

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois, when the state is awarding authority; the county treasurer, when a county is the awarding authority; or the city, village, or town treasurer, when a city, village, or town is the awarding authority.

If a combination bid is submitted, the proposal guaranties which accompany the individual proposals making up the combination will be considered as also covering the combination bid.

The amount of the proposal guaranty check is _____ \$(). If this proposal is accepted and the undersigned shall fail to execute a contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty shall become the property of the State of Illinois, and shall be considered as payment of damages due to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise, the bid bond shall become void or the proposal guaranty check shall be returned to the undersigned.

Attach Cashier's Check or Certified Check Here

In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual proposal. If the guaranty check is placed in another proposal, state below where it may be found.

The proposal guaranty check will be found in the proposal for:

Item _____

Section No. _____

County _____

Mark the proposal cover sheet as to the type of proposal guaranty submitted.

BD 354 (Rev. 11/2001)

RETURN WITH BID

6. **COMBINATION BIDS.** The undersigned further agrees that if awarded the contract for the sections contained in the following combination, he/she will perform the work in accordance with the requirements of each individual proposal comprising the combination bid specified in the schedule below, and that the combination bid shall be prorated against each section in proportion to the bid submitted for the same. If an error is found to exist in the gross sum bid for one or more of the individual sections included in a combination, the combination bid shall be corrected as provided in the specifications.

When a combination bid is submitted, the schedule below must be completed in each proposal comprising the combination.

If alternate bids are submitted for one or more of the sections comprising the combination, a combination bid must be submitted for each alternate.

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices shall govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **CERTIFICATE OF AUTHORITY.** The undersigned bidder, if a business organized under the laws of another State, assures the Department that it will furnish a copy of its certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish the certificate within the time provided for execution of an awarded contract may be cause for cancellation of the award and forfeiture of the proposal guaranty to the State.

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT
NUMBER -

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01/09/2003

98714

State Job # - C-99-051-01
PPS NBR - 9-95920-0100
County Name - PULASKI- -
Code - 153 - -
District - 9 - -
Section Number - 77-(1,2)RS-2

Project Number
IM-057-1/191/013

Route
FAI 57

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0320887	POLYMER CONCRETE	CU FT	45.000				
X0321744	SILICONE JT SEAL 2	FOOT	49.000				
X0322329	TIMBER CURB REMOVAL	FOOT	87.500				
X0322729	MATL TRANSFER DEVICE	TON	57,700.000				
X0322878	TIMBER CURB	FOOT	87.500				
X0322932	SILICONE JT SEAL 1.5"	FOOT	592.000				
X0440400	FRENCH DRAINS	EACH	82.000				
X3551600	BIT BASE CSE 14	SQ YD	7,368.000				
X4066418	BC SC SUPER "C" N90	TON	6,434.000				
X4066430	BC SC SUPER "D" N105	TON	18,162.000				
X4066618	BCBC SUP IL-19.0 N90	TON	3,185.000				
X4066620	BCBC SUP IL-19.0 N105	TON	36,353.000				
X6331009	REM/REPL SPBGR SPL	FOOT	1,959.000				
X7015050	PORT CHANGE MESS SIGN	CAL MO	30.000				
X7200400	WK ZONE PUB INFO SGNS	EACH	8.000				

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Route
FAI 57

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
Z0001800	APPROACH SL REP (PD)	SQ YD	18.000				
Z0002000	ATTENUATOR BASE	SQ YD	187.000				
Z0002600	BAR SPLICERS	EACH	196.000				
Z0006110	BR DK MICRO CON OVLAY	SQ YD	4,826.000				
Z0006204	BR DECK HY-SCAR 1/2	SQ YD	4,826.000				
Z0016001	DECK SLAB REP (FD-T1)	SQ YD	1.000				
Z0016002	DECK SLAB REP (FD-T2)	SQ YD	91.000				
Z0017202	DOWEL BARS 1 1/2	EACH	3,240.000				
Z0056200	SAND MOD IMP ATT REL	EACH	120.000				
Z0056275	SAND MOD IMP ATTEN	EACH	76.000				
Z0056400	SAND MOD IMP ATT TEMP	EACH	120.000				
Z0075310	TIE BARS 3/4	EACH	2,501.000				
20100110	TREE REMOV 6-15	UNIT	14.000				
20100210	TREE REMOV OVER 15	UNIT	49.000				
20100500	TREE REMOV ACRES	ACRE	0.300				

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State Job # - C-99-051-01
PPS NBR - 9-95920-0100
County Name - PULASKI- -
Code - 153 - -
District - 9 - -
Section Number - 77-(1,2)RS-2

Project Number
IM-057-1/191/013

Route
FAI 57

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
25000200	SEEDING CL 2	ACRE	4.300				
25000350	SEEDING CL 7	ACRE	4.300				
25000400	NITROGEN FERT NUTR	POUND	680.700				
25000500	PHOSPHORUS FERT NUTR	POUND	510.500				
25000600	POTASSIUM FERT NUTR	POUND	510.500				
25000700	AGR GROUND LIMESTONE	TON	8.500				
25100115	MULCH METHOD 2	ACRE	8.600				
25100630	EROSION CONTR BLANKET	SQ YD	2,640.000				
28000250	TEMP EROS CONTR SEED	POUND	430.000				
28000300	TEMP DITCH CHECKS	EACH	14.000				
28000400	PERIMETER EROS BAR	FOOT	1,094.000				
28100107	STONE RIPRAP CL A4	SQ YD	3,052.000				
28100205	STONE RIPRAP CL A3	TON	189.000				
28102600	STONE RIPRAP DITCH	TON	2,375.000				
28200100	FILTER FAB FOR RIPRAP	SQ YD	3,052.000				

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County Name - PULASKI- -
Code - 153 - -
District - 9 - -
Section Number - 77-(1,2)RS-2

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
31100500	SUB GRAN MAT A 6	SQ YD	4,150.000				
35500800	BIT BASE CSE 11	SQ YD	1,808.000				
40600100	BIT MATLS PR CT	GALLON	30,804.000				
40600300	AGG PR CT	TON	514.000				
40600400	MIX CR JTS FLANGEWYS	TON	32.000				
40600895	CONSTRUC TEST STRIP	EACH	2.000				
40600980	BIT SURF REM BUTT JT	SQ YD	2,321.000				
40600985	PCC SURF REM BUTT JT	SQ YD	216.000				
40600990	TEMPORARY RAMP	SQ YD	700.000				
42100200	CONT REINF PCC PVT 9	SQ YD	2,342.000				
42100800	PAVT REINFORCEMENT 9	SQ YD	2,342.000				
44000004	BIT SURF REM 1	SQ YD	208,817.000				
44000100	PAVEMENT REM	SQ YD	10,536.000				
44000910	BIT CONC REMOV (DECK)	SQ YD	5,057.000				
44001430	BIT SHOULDER REMOV	SQ YD	7,487.000				

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County Name - PULASKI- -
Code - 153 - -
District - 9 - -
Section Number - 77-(1,2)RS-2

Project Number
IM-057-1/191/013

Route
FAI 57

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
44200561	CL A PATCH T1 11	SQ YD	180.000				
44200565	CL A PATCH T2 11	SQ YD	950.000				
44200569	CL A PATCH T3 11	SQ YD	574.000				
44200571	CL A PATCH T4 11	SQ YD	2,930.000				
44200573	CL A PATCH T1 12	SQ YD	44.000				
44200577	CL A PATCH T2 12	SQ YD	43.000				
44200581	CL A PATCH T3 12	SQ YD	62.000				
44200970	CL B PATCH T2 10	SQ YD	181.000				
44200982	CL B PATCH T2 11	SQ YD	339.000				
44200986	CL B PATCH T3 11	SQ YD	38.000				
44200988	CL B PATCH T4 11	SQ YD	32.000				
44201019	CL B PATCH T2 14	SQ YD	1,064.000				
44201023	CL B PATCH T3 14	SQ YD	170.000				
44212900	PVT PATCHING (PD)	SQ YD	65.000				
44213000	PATCH REINFORCEMENT	SQ YD	4,783.000				

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State Job # - C-99-051-01
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District - 9 - -
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Project Number
IM-057-1/191/013

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
44213100	PAVEMENT FABRIC	SQ YD	240.000				
44213200	SAW CUTS	FOOT	29,246.000				
48100100	AGGREGATE SHLDS A	TON	6,351.000				
48200600	BIT SHOULDERS 8	SQ YD	2,849.000				
48202000	BIT SHOULDERS SUPER	TON	16,997.000				
50102400	CONC REM	CU YD	95.800				
50300255	CONC SUP-STR	CU YD	97.800				
50300260	BR DECK GROOVING	SQ YD	4,732.000				
50300300	PROTECTIVE COAT	SQ YD	5,012.000				
50301245	FORM CONC REP =< 5	SQ FT	67.000				
50800205	REINF BARS, EPOXY CTD	POUND	12,430.000				
60100060	CONC HDWL FOR P DRAIN	EACH	28.000				
* 60100074	SHOULDER REM & REPL 8	FOOT	200.000				
60107600	PIPE UNDERDRAINS 4	FOOT	11,155.000				
60108100	PIPE UNDERDRAIN 4 SP	FOOT	850.000				
				* REVISED : JANUARY 3, 2003			

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Route
FAI 57

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60404400	FR & GRATES T4	EACH	1.000				
60500060	REMOV INLETS	EACH	1.000				
63000000	SPBGR TY A	FOOT	5,362.500				
63000025	SPBGR ATTACH TO STR	FOOT	512.500				
63100045	TRAF BAR TERM T2	EACH	10.000				
63100070	TRAF BAR TERM T5	EACH	3.000				
63100085	TRAF BAR TERM T6	EACH	20.000				
63100167	TR BAR TRM T1 SPL TAN	EACH	17.000				
63100169	TR BAR TRM T1 SPL FLR	EACH	6.000				
63200310	GUARDRAIL REMOV	FOOT	7,226.500				
63300900	VERT ADJ OF GUARD RL	FOOT	6,844.500				
* 63400105	GUARD POSTS	EACH	24.000				
63500105	DELINEATORS	EACH	312.000				
64200105	SHOULDER RUMBLE STRIP	FOOT	161,107.000				
67000400	ENGR FIELD OFFICE A	CAL MO	10.000				
67100100	MOBILIZATION	L SUM	1.000				
		* REVISED : JANUARY 3, 2003					

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
70100205	TRAF CONT-PROT 701401	EACH	1.000				
70100207	TRAF CONT-PROT 701402	EACH	8.000				
70100420	TRAF CONT-PROT 701411	EACH	1.000				
70100450	TRAF CONT-PROT 701201	L SUM	1.000				
70100700	TRAF CONT-PROT 701406	L SUM	1.000				
70103815	TR CONT SURVEILLANCE	CAL DA	66.000				
70300100	SHORT-TERM PAVT MKING	FOOT	35,312.000				
70300220	TEMP PVT MK LINE 4	FOOT	199,198.000				
70300250	TEMP PVT MK LINE 8	FOOT	1,547.000				
70300260	TEMP PVT MK LINE 12	FOOT	96.000				
70300280	TEMP PVT MK LINE 24	FOOT	154.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	3,576.000				
70400100	TEMP CONC BARRIER	FOOT	4,620.000				
70400200	REL TEMP CONC BARRIER	FOOT	4,542.000				
78000200	THPL PVT MK LINE 4	FOOT	178,740.000				

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Route
FAI 57

[illegible]

CONTRACT NUMBER 98714

THIS IS THE TOTAL BID \$ _____

NOTES:

- 1. Each PAY ITEM should have a UNIT PRICE and a TOTAL PRICE.**
- 2. The UNIT PRICE shall govern if no TOTAL PRICE is shown or if there is a discrepancy between the product of the UNIT PRICE multiplied by the QUANTITY.**
- 3. If a UNIT PRICE is omitted, the TOTAL PRICE will be divided by the QUANTITY in order to establish a UNIT PRICE.**
- 4. A bid may be declared UNACCEPTABLE if neither a unit price nor a total price is shown.**

RETURN WITH BID

STATE REQUIRED ETHICAL STANDARDS GOVERNING CONTRACT PROCUREMENT: ASSURANCES, CERTIFICATIONS AND DISCLOSURES

I. GENERAL

A. Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. By execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances has been read and understood, that each certification is made and understood, and that each disclosure requirement has been understood and completed.

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for termination of the contract and the suspension or debarment of the bidder.

II. ASSURANCES

A. The assurances hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous assurance, and the surety providing the performance bond shall be responsible for the completion of the contract.

B. Felons

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any state agency from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-10.

C. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

(a) Prohibition. It is unlawful for any person holding an elective office in this State, holding a seat in the General Assembly, or appointed to or employed in any of the offices or agencies of state government and who receives compensation for such employment in excess of 60% of the salary of the Governor of the State of Illinois, or who is an officer or employee of the Capital Development Board or the Illinois Toll Highway Authority, or who is the spouse or minor child of any such person to have or acquire any contract, or any direct pecuniary interest in any contract therein, whether for stationery, printing, paper, or any services, materials, or supplies, that will be wholly or partially satisfied by the payment of funds appropriated by the General Assembly of the State of Illinois or in any contract of the Capital Development Board or the Illinois Toll Highway authority.

(b) Interests. It is unlawful for any firm, partnership, association or corporation, in which any person listed in subsection (a) is entitled to receive (i) more than 7 1/2% of the total distributable income or (ii) an amount in excess of the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(c) Combined interests. It is unlawful for any firm, partnership, association, or corporation, in which any person listed in subsection (a) together with his or her spouse or minor children is entitled to receive (i) more than 15%, in the aggregate, of the total distributable income or (ii) an amount in excess of 2 times the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(d) Securities. Nothing in this Section invalidates the provisions of any bond or other security previously offered or to be offered for sale or sold by or for the State of Illinois.

(e) Prior interests. This Section does not affect the validity of any contract made between the State and an officer or employee of the State or member of the General Assembly, his or her spouse, minor child or any combination of those persons if that contract was in existence before his or her election or employment as an officer, member, or employee. The contract is voidable, however, if it cannot be completed within 365 days after the officer, member, or employee takes office or is employed.

The current salary of the Governor is \$150,700.00. Sixty percent of the salary is \$90,420.00.

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2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-13, or that an effective exemption has been issued by the Board of Ethics to any individual subject to the Section 50-13 prohibitions pursuant to the provisions of Section 50-20 of the Code and Executive Order Number 3 (1998). Information concerning the exemption process is available from the Department upon request.

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

(a) It is unlawful for any person employed in or on a continual contractual relationship with any of the offices or agencies of State government to participate in contract negotiations on behalf of that office or agency with any firm, partnership, association, or corporation with whom that person has a contract for future employment or is negotiating concerning possible future employment.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-15, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

E. Inducements

1. The Illinois Procurement Code provides:

Section 50-25. Inducement. Any person who offers or pays any money or other valuable thing to any person to induce him or her not to bid for a State contract or as recompense for not having bid on a State contract is guilty of a Class 4 felony. Any person who accepts any money or other valuable thing for not bidding for a State contract or who withholds a bid in consideration of the promise for the payment of money or other valuable thing is guilty of a Class 4 felony.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-25, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

Section 50-30. Revolving door prohibition. Chief procurement officers, associate procurement officers, State purchasing officers, their designees whose principal duties are directly related to State procurement, and executive officers confirmed by the Senate are expressly prohibited for a period of 2 years after terminating an affected position from engaging in any procurement activity relating to the State agency most recently employing them in an affected position for a period of at least 6 months. The prohibition includes, but is not limited to: lobbying the procurement process; specifying; bidding; proposing bid, proposal, or contract documents; on their own behalf or on behalf of any firm, partnership, association, or corporation. This Section applies only to persons who terminate an affected position on or after January 15, 1999.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-30, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offerors, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the chief procurement officer.

2. The bidder assures the Department that it has not failed to report any relevant facts concerning the practices addressed in Section 50-40 which may involve the contract for which the bid is submitted.

H. Confidentiality

1. The Illinois Procurement Code provides:

Section 50-45. Confidentiality. Any chief procurement officer, State purchasing officer, designee, or executive officer who willfully uses or allows the use of specifications, competitive bid documents, proprietary competitive information, proposals, contracts, or selection information to compromise the fairness or integrity of the procurement, bidding, or contract process shall be subject to immediate dismissal, regardless of the Personnel code, any contract, or any collective bargaining agreement, and may in addition be subject to criminal prosecution.

2. The bidder assures the Department that it has no knowledge of any fact relevant to the practices addressed in Section 50-45 which may involve the contract for which the bid is submitted.

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

Section 50-50. Insider information. It is unlawful for any current or former elected or appointed State official or State employee to knowingly use confidential information available only by virtue of that office or employment for actual or anticipated gain for themselves or another person.

2. The bidder assures the Department that it has no knowledge of any facts relevant to the practices addressed in Section 50-50 which may involve the contract for which the bid is submitted.

III. CERTIFICATIONS

A. The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous certification, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

- (a) Prohibition. No person or business shall be awarded a contract or subcontract under this Code who:

(1) has been convicted under the laws of Illinois or any other state of bribery or attempting to bribe an officer or employee of the State of Illinois or any other state in that officer's or employee's official capacity; or

(2) has made an admission of guilt of that conduct that is a matter of record but has not been prosecuted for that conduct.

- (b) Businesses. No business shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of the business if the employee or agent is no longer employed by the business and:

(1) the business has been finally adjudicated not guilty; or

(2) the business demonstrates to the governmental entity with which it seeks to contract, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

- (c) Conduct on behalf of business. For purposes of this Section, when an official, agent, or employee of a business committed the bribery or attempted bribery on behalf of the business and in accordance with the direction or authorization of a responsible official of the business, the business shall be chargeable with the conduct.

- (d) Certification. Every bid submitted to and contract executed by the State shall contain a certification by the contractor that the contractor is not barred from being awarded a contract or subcontract under this Section. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

2. The bidder certifies that it is not barred from being awarded a contract under Section 50.5.

C. Educational Loan

1. Section 3 of the Educational Loan Default Act provides:

§ 3. No State agency shall contract with an individual for goods or services if that individual is in default, as defined in Section 2 of this Act, on an educational loan. Any contract used by any State agency shall include a statement certifying that the individual is not in default on an educational loan as provided in this Section.

2. The bidder, if an individual as opposed to a corporation, partnership or other form of business organization, certifies that the bidder is not in default on an educational loan as provided in Section 3 of the Act.

D. Bid-Rigging/Bid Rotating

1. Section 33E-11 of the Criminal Code of 1961 provides:

§ 33E-11. (a) Every bid submitted to and public contract executed pursuant to such bid by the State or a unit of local government shall contain a certification by the prime contractor that the prime contractor is not barred from contracting with any unit of State or local government as a result of a violation of either Section 33E-3 or 33E-4 of this Article. The State and units of local government shall provide the appropriate forms for such certification.

RETURN WITH BID

(b) A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

2. The bidder certifies that it is not barred from contracting with the Department by reason of a violation of either Section 33E-3 or Section 33E-4.

E. International Anti-Boycott

1. Section 5 of the International Anti-Boycott Certification Act provides:

§ 5. State contracts. Every contract entered into by the State of Illinois for the manufacture, furnishing, or purchasing of supplies, material, or equipment or for the furnishing of work, labor, or services, in an amount exceeding the threshold for small purchases according to the purchasing laws of this State or \$10,000.00, whichever is less, shall contain certification, as a material condition of the contract, by which the contractor agrees that neither the contractor nor any substantially-owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act.

2. The bidder makes the certification set forth in Section 5 of the Act.

F. Drug Free Workplace

1. The Illinois "Drug Free Workplace Act" applies to this contract and it is necessary to comply with the provisions of the "Act" if the contractor is a corporation, partnership, or other entity (including a sole proprietorship) which has 25 or more employees.

2. The bidder certifies that if awarded a contract in excess of \$5,000 it will provide a drug free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the contractor's workplace; specifying the actions that will be taken against employees for violations of such prohibition; and notifying the employee that, as a condition of employment on such contract, the employee shall abide by the terms of the statement, and notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(b) Establishing a drug free awareness program to inform employees about the dangers of drug abuse in the workplace; the contractor's policy of maintaining a drug free workplace; any available drug counseling, rehabilitation, and employee assistance programs; and the penalties that may be imposed upon employees for drug violations.

(c) Providing a copy of the statement required by subparagraph (1) to each employee engaged in the performance of the contract and to post the statement in a prominent place in the workplace.

(d) Notifying the Department within ten (10) days after receiving notice from an employee or otherwise receiving actual notice of the conviction of an employee for a violation of any criminal drug statute occurring in the workplace.

(e) Imposing or requiring, within 30 days after receiving notice from an employee of a conviction or actual notice of such a conviction, an appropriate personnel action, up to and including termination, or the satisfactory participation in a drug abuse assistance or rehabilitation program approved by a federal, state or local health, law enforcement or other appropriate agency.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment, and rehabilitation is required and indicating that a trained referral team is in place.

(g) Making a good faith effort to continue to maintain a drug free workplace through implementation of the actions and efforts stated in this certification.

G. Debt Delinquency

1. The Illinois Procurement Code provides:

Section 50-11. Debt Delinquency.

- (a) No person shall submit a bid or enter into a contract with a State agency under this Code if that person knows or should know that he or she is delinquent in the payment of any debt to the State, unless the person has entered into a deferred payment plan to pay off the debt. For purposes of this Section, the phrase "delinquent in the payment of any debt" shall be determined by the Debt Collection Board.
 - (b) Every bid submitted to and contract executed by the State shall contain a certification by the bidder or contractor that the contractor is not barred from being awarded a contract under this Section and that the contractor acknowledges that the contracting State agency may declare the contract void if the certification completed pursuant to this subsection (b) is false.
2. The bidder certifies that it is not barred from being awarded a contract by this section. The bidder acknowledges that the Department may declare the contract void if this certification is false.

TO BE RETURNED WITH BID

IV. DISCLOSURES

A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous disclosure, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than \$10,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

In addition, all disclosures shall indicate any other current or pending contracts, proposals, leases, or other ongoing procurement relationships the bidding entity has with any other unit of state government and shall clearly identify the unit and the contract, proposal, lease, or other relationship.

2. **Disclosure Forms.** Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid or incorporated by reference.**

C. Disclosure Form Instructions

Form A: For bidders that have previously submitted the information requested in Form A

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may sign the following certification statement indicating that the information previously submitted by the bidder is, as of the date of signature, current and accurate. The Certification must be signed and dated by a person who is authorized to execute contracts for the bidding company. Before signing this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder signs the Certification, the Bidder should proceed to Form B instructions.

CERTIFICATION STATEMENT

I have determined that the Form A disclosure information previously submitted is current and accurate, and all forms are hereby incorporated by reference in this bid. Any necessary additional forms or amendments to previously submitted forms are attached to this bid.

(Bidding Company)

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative

Date

Form A: For bidders who have NOT previously submitted the information requested in Form A

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than \$90,420.00? YES ___ NO ___
3. Does anyone in your organization receive more than \$90,420.00 of the bidding entity's or parent entity's distributive income? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.) YES ___ NO ___
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than \$90,420.00? YES ___ NO ___
(Note: Only one set of forms needs to be completed per person per bid even if a specific individual would require a yes answer to more than one question.)

A "YES" answer to any of these questions requires the completion of Form A. The bidder must determine each individual in the bidding entity or the bidding entity's parent company that would cause the questions to be answered "Yes". Each form must be signed and dated by a person that is authorized to execute contracts for your organization. **Photocopied or stamped signatures are not acceptable.** The person signing can be, but does not have to be, the person for which the form is being completed. The bidder is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the NOT APPLICABLE STATEMENT on page 2 of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

Form B: Identifying Other Contracts & Procurement Related Information Disclosure Form B must be completed for each bid submitted by the bidding entity. It must be signed by an individual who is authorized to execute contracts for the bidding entity. *Note: Signing the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, signed and dated or the bidder may be considered nonresponsive and the bid will not be accepted.*

The Bidder shall identify, by checking Yes or No on Form B, whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the bidder only needs to complete the signature box on the bottom of Form B. If "Yes" is checked, the bidder must do one of the following:

Option I: If the bidder did not submit an Affidavit of Availability to obtain authorization to bid, the bidder must list all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Do not include IDOT contracts. Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included. Bidders who submit Affidavits of Availability are suggested to use Option II.

Option II: If the bidder is required and has submitted an Affidavit of Availability in order to obtain authorization to bid, the bidder may write or type "See Affidavit of Availability" which indicates that the Affidavit of Availability is incorporated by reference and includes all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. For any contracts that are not covered by the Affidavit of Availability, the bidder must identify them on Form B or on an attached sheet(s). These might be such things as leases.

D. Bidders Submitting More Than One Bid

Bidders submitting multiple bids may submit one set of forms consisting of all required Form A disclosures and one Form B for use with all bids. Please indicate in the space provided below the bid item that contains the original disclosure forms and the bid items which incorporate the forms by reference.

- The bid submitted for letting item _____ contains the Form A disclosures or Certification Statement and the Form B disclosures. The following letting items incorporate the said forms by reference:

ILLINOIS DEPARTMENT
OF TRANSPORTATIONForm A
Financial Information &
Potential Conflicts of Interest
Disclosure

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Code (30 ILCS 500). Vendors desiring to enter into a contract with the State of Illinois must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for bids in excess of \$10,000, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the BIDDER (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than \$90,420.00 (60% of the Governor's salary as of 7/1/01). **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

FOR INDIVIDUAL (type or print information)**NAME:** _____**ADDRESS** _____**Type of ownership/distributable income share:**

stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):
 % or \$ value of ownership/distributable income share: _____

2. Disclosure of Potential Conflicts of Interest. Check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If the answer to any question is "Yes", please attach additional pages and describe.

(a) State employment, currently or in the previous 3 years, including contractual employment of services.

Yes ___ No ___

If your answer is yes, please answer each of the following questions.

- Are you currently an officer or employee of either the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No ___
- Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name the State agency for which you are employed and your annual salary. _____

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3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___
4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15% in aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___ No ___

(b) State employment of spouse, father, mother, son, or daughter, including contractual employment for services in the previous 2 years.

Yes ___ No ___

If your answer is yes, please answer each of the following questions.

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No ___
2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____
3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the salary of the Governor as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___
4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.

Yes ___ No ___

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter.

Yes ___ No ___

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United State of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years.

Yes ___ No ___

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter.

Yes ___ No ___

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government.

Yes ___ No ___

RETURN WITH BID/OFFER

(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___ No ___

(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.

Yes ___ No ___

(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.

Yes ___ No ___

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page.

Completed by:

Name of Authorized Representative (type or print)

Completed by:

Title of Authorized Representative (type or print)

Completed by:

Signature of Individual or Authorized Representative

Date

NOT APPLICABLE STATEMENT

I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.

This Disclosure Form A is submitted on behalf of the CONTRACTOR listed on the previous page.

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative

Date

RETURN WITH BID/OFFER

ILLINOIS DEPARTMENT
OF TRANSPORTATION

Form B
Other Contracts &
Procurement Related Information
Disclosure

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of \$10,000, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

1. Identifying Other Contracts & Procurement Related Information. The BIDDER shall identify whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes ___ No ___

If **"No"** is checked, the bidder only needs to complete the signature box on the bottom of this page.

2. If "Yes" is checked. Identify each such relationship by showing State of Illinois agency name and other descriptive information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

THE FOLLOWING STATEMENT MUST BE SIGNED

_____ Name of Authorized Representative (type or print)	
_____ Title of Authorized Representative (type or print)	
_____ Signature of Authorized Representative	_____ Date

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

The following requirements of the Illinois Department of Human Rights' Rules and Regulations are applicable to bidders on all construction contracts advertised by the Illinois Department of Transportation:

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

- (a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.
- (b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.



Contract No. 98714
PULASKI County
Section 77-(1,2)RS-2
Project IM-571(191)13
Route FAI 57
District 9 Construction Funds

PART I. IDENTIFICATION

Dept. Human Rights # _____ Duration of Project: _____

Name of Bidder: _____

PART II. WORKFORCE PROJECTION

A. The undersigned bidder has analyzed minority group and female populations, unemployment rates and availability of workers for the location in which this contract work is to be performed, and for the locations from which the bidder recruits employees, and hereby submits the following workforce projection including a projection for minority and female employee utilization in all job categories in the workforce to be allocated to this contract:

TABLE A

TOTAL Workforce Projection for Contract												
			MINORITY EMPLOYEES						TRAINEES			
JOB CATEGORIES	TOTAL EMPLOYEES		BLACK		HISPANIC		*OTHER MINOR.		APPREN- TICES		ON THE JOB TRAINEES	
	M	F	M	F	M	F	M	F	M	F	M	F
OFFICIALS (MANAGERS)												
SUPERVISORS												
FOREMEN												
CLERICAL												
EQUIPMENT OPERATORS												
MECHANICS												
TRUCK DRIVERS												
IRONWORKERS												
CARPENTERS												
CEMENT MASONS												
ELECTRICIANS												
PIPEFITTERS, PLUMBERS												
PAINTERS												
LABORERS, SEMI-SKILLED												
LABORERS, UNSKILLED												
TOTAL												

TABLE B

CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT			
TOTAL EMPLOYEES		MINORITY EMPLOYEES	
M	F	M	F

TABLE C

TOTAL Training Projection for Contract								
EMPLOYEES IN TRAINING	TOTAL EMPLOYEES		BLACK		HISPANIC		*OTHER MINOR.	
	M	F	M	F	M	F	M	F
APPRENTICES								
ON THE JOB TRAINEES								

*Other minorities are defined as Asians (A) or Native Americans (N).

Please specify race of each employee shown in Other Minorities column.

Note: See instructions on the next page

FOR DEPARTMENT USE ONLY

RETURN WITH BID

**Contract No. 98714
PULASKI County
Section 77-(1,2)RS-2
Project IM-571(191)13
Route FAI 57
District 9 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

- B. Included in "Total Employees" under Table A is the total number of **new hires** that would be employed in the event the undersigned bidder is awarded this contract.

The undersigned bidder projects that: (number) _____ new hires would be recruited from the area in which the contract project is located; and/or (number) _____ new hires would be recruited from the area in which the bidder's principal office or base of operation is located.

- C. Included in "Total Employees" under Table A is a projection of numbers of persons to be employed directly by the undersigned bidder as well as a projection of numbers of persons to be employed by subcontractors.

The undersigned bidder estimates that (number) _____ persons will be directly employed by the prime contractor and that (number) _____ persons will be employed by subcontractors.

PART III. AFFIRMATIVE ACTION PLAN

- A. The undersigned bidder understands and agrees that in the event the foregoing minority and female employee utilization projection included under **PART II** is determined to be an underutilization of minority persons or women in any job category, and in the event that the undersigned bidder is awarded this contract, he/she will, prior to commencement of work, develop and submit a written Affirmative Action Plan including a specific timetable (geared to the completion stages of the contract) whereby deficiencies in minority and/or female employee utilization are corrected. Such Affirmative Action Plan will be subject to approval by the contracting agency and the **Department of Human Rights**.
- B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____

Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

The Bidder's signature on the Proposal Signature Sheet will constitute the signing of this form. The following signature block needs to be completed only if revisions are required.

Signature: _____ Title: _____ Date: _____

Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.

Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.

Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.

Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

BC-1256-Pg. 2 (Rev. 3/98)

RETURN WITH BID

ADDITIONAL FEDERAL REQUIREMENTS

In addition to the Required Contract Provisions for Federal-Aid Construction Contracts (FHWA 1273), all bidders make the following certifications.

- A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.
- B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:
1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____
 2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES _____ NO _____

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**Contract No. 98714
PULASKI County
Section 77-(1,2)RS-2
Project IM-571(191)13
Route FAI 57
District 9 Construction Funds**

PROPOSAL SIGNATURE SHEET

The undersigned bidder hereby makes and submits this bid on the subject Proposal, thereby assuring the Department that all requirements of the Invitation for Bids and rules of the Department have been met, that there is no misunderstanding of the requirements of paragraph 3 of this Proposal, and that the contract will be executed in accordance with the rules of the Department if an award is made on this bid.

(IF AN INDIVIDUAL)

Firm Name _____

Signature of Owner _____

Business Address _____

(IF A CO-PARTNERSHIP)

Firm Name _____

By _____

Business Address _____

Name and Address of All Members of the Firm:

(IF A CORPORATION)

Corporate Name _____

By _____

Signature of Authorized Representative _____

Typed or printed name and title of Authorized Representative _____

Attest _____

(IF A JOINT VENTURE, USE THIS SECTION
FOR THE MANAGING PARTY AND THE
SECOND PARTY SHOULD SIGN BELOW)

Business Address _____

(IF A JOINT VENTURE)

Corporate Name _____

By _____

Signature of Authorized Representative _____

Typed or printed name and title of Authorized Representative _____

Attest _____

Signature _____

Business Address _____

If more than two parties are in the joint venture, please attach an additional signature sheet.

RETURN WITH BID



**Illinois Department
of Transportation**

**Division of Highways
Proposal Bid Bond**
(Effective November 1, 1992)

Item No. _____
Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

_____ as SURETY, are
held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in
Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of invitation for bids, whichever is the lesser sum, well
and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, That Whereas, the PRINCIPAL has submitted a bid proposal to the STATE OF
ILLINOIS, acting through the Department of Transportation, for the improvement designated by the Transportation Bulletin Item Number and Letting Date
indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified
in the bidding and contract documents, submit a DBE Utilization Plan that is accepted and approved by the Department; and if, after award by the
Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required
insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt
payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to make the required DBE submission
or to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between
the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by
said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the Department determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then
Surety shall pay the penal sum to the Department within fifteen (15) days of written demand therefor. If Surety does not make full payment within such
period of time, the Department may bring an action to collect the amount owed. Surety is liable to the Department for all its expenses, including attorney's
fees, incurred in any litigation in which it prevails either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this
_____ day of _____ A.D., _____.

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By: _____ By: _____
(Signature & Title) (Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
COUNTY OF _____

I, _____, a Notary Public in and for said County, do hereby certify that
_____ and _____

(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and
SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary
act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____, A.D. _____.

My commission expires _____

Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing below the Principal is ensuring
the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid
bond as shown above.

Electronic Bid Bond ID# _____ Company/Bidder Name _____ Signature and Title _____

PROPOSAL ENVELOPE



Illinois Department
of Transportation

PROPOSALS

for construction work advertised for bids by the
Illinois Department of Transportation

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

Bidders should use an IDOT proposal envelope or affix this form to the front of a 10" x 13" envelope for the submittal of bids. If proposals are mailed, they should be enclosed in a second or outer envelope addressed to:

Engineer of Design and Environment - Room 323
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

NOTICE

Individual bids, including Bid Bond and/or supplemental information if required, should be securely stapled.

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

None of the following material needs to be returned with the bid package unless the special provisions require documentation and/or other information to be submitted.

Contract No. 98714
PULASKI County
Section 77-(1,2)RS-2
Project IM-571(191)13
Route FAI 57
District 9 Construction Funds



Illinois Department of Transportation



- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., January 17, 2003. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 98714
PULASKI County
Section 77-(1,2)RS-2
Project IM-571(191)13
Route FAI 57
District 9 Construction Funds**

On FAI Route 57 from north of the Perks Road overpass and extending southerly 7.75 miles to east of Pulaski the improvement will consist of pavement patching, bituminous surface removal, 6 ft and variable width pavement removal and the replacement with bituminous base course 2 @ 24 ft width bituminous concrete resurfacing, 4 ft and 10 ft width bituminous shoulders, 4 ft and 2 ft width aggregate shoulders, the resurfacing of the Ullin interchange ramps and the rehabilitation of six bridges.

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Kirk Brown, Secretary

FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2003

This sheet contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction
 (Adopted 1-1-02) (Revised 1-1-03)

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442 Pavement Patching	3
449 Removal and Replacement of Preformed Elastomeric Compression Joint Seal	4
505 Steel Structures	5
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1069 Pole and Tower	27
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RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2002, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI Route 57, Project IM-057-1(191)013, Section 77-(1,2)RS-2, Pulaski County and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

ROUTE: FAI Route 57

SECTION: 77-(1,2)RS-2

COUNTY: Pulaski

CONTRACT: 98714

LOCATION OF PROJECT

The project is located on I-57 in Pulaski County. The project begins north of Perks Road overpass then extends southerly 7.7 miles to just south of the Pulaski Road overpass.

DESCRIPTION OF PROJECT

The improvement will include the milling and resurfacing of the northbound and southbound lanes on Interstate 57. From the beginning, Station 62+57NB and 64+01SB (north of Perks Road Overpass), to just south of Ullin, Station 228+50, the proposed improvement will consist of pavement patching, 1" bituminous surface removal, 2 1/4" bituminous concrete binder course, and 1 1/2" bituminous concrete surface course. From Station 228+50 to the ending Station 472+00, the proposed improvement will consist of pavement patching, 1" bituminous surface removal, 3 1/2" bituminous concrete binder course, and 1 1/2" bituminous concrete surface course. The existing bituminous shoulders will be resurfaced, pipe underdrains will be improved as needed, and the guardrail will be upgraded as needed. The six bridges within the project limits will receive BSMART improvements. The existing metal post delineators will be replaced with delineators (Standard 635001). The existing guardrail terminals will be replaced with new traffic barrier terminals to meet current highway standards.

COMPLETION DATE

All work shall be completed by November 1, 2003.

TRAFFIC CONTROL PLAN

Effective 1985 Revised 2/17/99

Traffic control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the guidelines contained in the National Manual on Uniform Traffic Control Devices for Streets and Highways, the Supplemental Specifications, these Special Provisions, and any special details and highway standards contained herein and in the plans.

Special attention is called to Articles 107.09 and 107.14 of the Standard Specifications for Road and Bridge Construction and the following traffic control related (1) Highway Standards; (2) Supplemental Specifications and Recurring Special Provisions; (3) Plan Details; and (4) other Special Provisions which are included in this contract:

1. Standards: 701101 701301 701402 701426
 701106 701311 701406 702001
 701201 701401 701411
2. Supplemental Specifications and Recurring Special Provisions:
 "Mommy/Daddy" Signs
 Portable Changeable Message Signs
3. Plan Details:
 - (a) "Uneven Pavement" Sign
 - (b) "Rough Grooved Surface" Sign
 - (c) Traffic Control at Entrance Ramps
4. Special Provisions:
 - (a) Signs
 - (b) Traffic Control and Protection, Standard 701401
 - (c) Traffic Control and Protection, Standard 701411
 - (d) Contract Prosecution
 - (e) Equipment Parking and Storage
 - (f) Portable Changeable Message Sign
 - (g) Traffic Control Deficiency Deduction
 - (h) Placement of Arrow Boards
 - (i) Holiday Lane Closure Restrictions
 - (j) Traffic Control and Protection

Traffic control standards shall be applied as directed by the Engineer. Suggested applications for each standard are as follows:

- 701001 This standard should be used where work operations are 15' or greater from the edge of pavement. This standard should be used along FAS Route 938.
- 701101 This standard shall apply along FAI 57 where work operations are less than 15' from the edge of pavement. A typical operation would be guardrail work.
- 701106 This standard should be used along FAI 57 when work operations are 15' or greater from the edge of pavement. A typical operation would be paved ditch to be broken in place.

- 701201 This standard shall be used along FAS 938 when work activities encroach in the area between the centerline and 2' outside the edge of pavement. Typical work activities include pavement patching.
- 701301 This standard should be used for short time operations along FAS 938 for marking patches.
- 701311 This standard should be used along FAS 938 during pavement marking operations.
- 701401 This standard shall be used on FAI 57 during pavement patching operations and bridge work.
- 701402 This standard shall be used on FAI 57 during work on the mainline bridges requiring concrete barrier. The mainline bridges are less than 2 miles apart, therefore, the Contractor shall schedule the traffic control together for the bridge work. This will also be used at the TR 60 overpass and Pulaski overpass.
- 701406 This standard shall be used where work operations will encroach on the lane adjacent to the shoulder or on the shoulder within 2' of the edge of pavement. Typical work operations include surface removal, placement of surface, binder, and shoulders along FAI 57. This standard will be used for daylight lane closures only. Standard 701401 will be used for overnight lane closures.
- 701411 This standard will be used during pavement patching, or any other construction operation requiring closure of a lane to traffic near entrance or exit ramps.
- 701426 This standard should be used for pavement striping, or other continuous or intermittent moving operations along I-57 where the average speed is greater than 1 MPH.

During the entire construction period, the road shall be kept open to traffic as follows:

- (a) In accordance with the applicable portions of the Standard Specifications during all construction operations.
- (b) No lane closures will be permitted during the holiday periods as stated in Article 107.09 of the Standard Specifications.
- (c) The Contractor shall schedule and conduct his operations so as to insure the least possible obstruction to traffic, create a minimum of confusion to the public, and conform to Article 107.09 of the Standard Specifications.
- (d) Access to all interchange ramps along FAI 57 shall be maintained to the greatest extent possible during all stages of the work. (See Detail of Traffic Control at Entrance Ramps and Standard 701411 included in the plans.) Ramps at the Ullin interchange shall not be closed, but traffic along a ramp may be diverted to the shoulder during resurfacing on that ramp.
- (e) If the Contractor's operation requires closing a portion of the roadway, FAI 57 shall be kept open to at least one lane of traffic in each direction at all times. FAS 938 shall be kept open to at least one lane of traffic at all times.

- (f) On FAI 57 the Contractor shall schedule the sequence of operations to produce the following results:

Applications 1 and 2 of Standard 701411 will not be allowed. When construction operations are being performed in the right travel lane in the vicinity of any entrance ramp onto the freeway, the lane closure shall not extend more than 200' beyond the end of the acceleration lane. This will allow traffic entering the freeway to do so in the right through lane without conflict to mainline traffic in the left through lane. The entering traffic will detour around the closure using the shoulder. (See Stage I of Detail of Traffic Control at Entrance Ramps included in the plans.) These operations must be completed before any right lane closure will be allowed 200' beyond the entrance ramp.

During Stage II, when construction will be permitted 200' beyond the entrance ramp in the right travel lane, traffic control shall be in accordance with Standard 701401 except that the taper length shall be altered as shown in Stage II of Detail of Traffic Control at Entrance Ramps included in the plans. If the lane closure can be moved further from the ramp, the taper length should be increased as much as possible up to the length shown on Standard 701401.

- (g) During the Contractor's patching operations no equipment, trucks, or personnel shall be allowed on the open lane. Work shall be done from the shoulder adjacent to the closed lane.
- (h) Lane closures shall be kept as short as possible. Any lane closures determined to be excessive by the Engineer shall be removed or shortened by the Contractor. No overnight lane closures will be permitted for the Class B patching operation north of the Cache River bridge. Overnight lane closures will be permitted for the Class A patching south of the Cache River bridge, pavement removal and replacement work, and for all bridge deck work.
- (i) No equipment shall be moved under its own power more than a 1,000 feet unless it is protected by a lane closure or Detail C of Standard 701426. Equipment moved less than 1,000 feet shall be confined to the shoulder area.
- (j) Cones, drums or barricades shall be placed on the closed lane, not the open lane. They may be moved over to allow paving equipment to pass but shall be immediately moved back after the last roller pass.

Additional advance warning signs "Road Construction 3 Miles Ahead", "Road Construction 2 Miles Ahead", and "Road Construction 1 Mile Ahead" shall be placed by the Contractor. The cost of these signs shall be included with the various items of traffic control.

Prior to allowing traffic on any portion of the roadway that has been resurfaced, the Contractor shall have erected "Uneven Pavement" signs that conform to the details shown in the plans. A sign every mile and at each end of the improvement will be required. The Contractor shall maintain the "Uneven Pavement" signs until the resurfacing operations are completed. If at any time the signs are in place but not applicable, they shall be turned from the view of motorists or covered as directed by the Engineer. The cost of furnishing, erecting, maintaining, and removing the required signs shall be incidental to the contract.

After a lift of bituminous concrete has been placed on a lane, that lane shall remain closed to traffic until the new mat has cooled to 150°F. If the lane must remain closed during periods of

darkness, the Contractor shall install the proper traffic control devices as shown on Standard 701401 at his own expense.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701401

In addition to the traffic control and protection shown elsewhere in the contract for multi-lane pavements, the Contractor shall place three barricades to be used as lane checks every 1,000' along with one barricade every 200'. All barricades shall be equipped with steady burning lights. In addition to the requirements of Standard 701401, three drums with steady burning lights shall be placed, prior to the removal of the pavement, immediately in front of the proposed patch location. Drums shall not be allowed to be substituted for barricades along the centerline of the lane closure.

These requirements shall be considered as included in the contract unit price per lump sum for TRAFFIC CONTROL AND PROTECTION, STANDARD 701401.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701411

This standard, including the detail of traffic control at entrance ramps included in the plans, will be required at all entrance and exit ramps on multi-lane highways, and conform to the Illinois Manual on Uniform Traffic Control Devices and as to allow for and maintain proper acceleration lanes as directed by the Engineer. Applications 1 and 2 of Standard 701411 will not be allowed (see Stage I of Traffic Control at Entrance Ramps included in the plans).

In addition to the requirements of Standard 701411, two construction speed limit signs meeting the requirements of Standard 701401 shall be used $\pm 500'$ past any entrance ramps, both northbound and southbound, that occur within the limits of the lane closure.

This standard and any cost incurred as a result of these requirements shall be paid for at the contract unit price each for TRAFFIC CONTROL AND PROTECTION, STANDARD 701411.

EQUIPMENT PARKING AND STORAGE

Revise the first paragraph of Article 701.04(b)(3) to read: During working hours, all vehicles and/or non-operating equipment which are parked, 2 hours or less, shall be parked at least 8 feet from the open traffic lane. For other periods of time during working or non-working hours, all vehicles, materials, and equipment shall be parked or stored in a protected area, if the protected area is within a distance of 1,000 feet of the work operation. If there is no protected area within the 1,000 feet, the Contractor may park the equipment 30 feet from the edge of the open lane providing there is no part of the equipment within the 30 feet. The 30 feet is acceptable for 4:1 slopes and flatter. If the distance to a protected area or clear zone region requires the equipment to be moved more than the 1,000 feet, then the Contractor shall load and transport the equipment to the protected area or beyond clear zone region. A protected area is defined as behind temporary concrete barrier, temporary bridge rail, or other man-made or natural barriers.

CLASS 2 SEEDING (MODIFIED) AND MULCH

This work shall be performed in accordance with Sections 250 and 251 of the Standard Specifications, as shown in the plans, and as follows:

- (a) Class 2 MODIFIED Seeding (Roadside Mixture) shall be used at the locations shown in the plans. The following seed mixtures and rates per acre shall be used during the time of year indicated:

Seed Mixture	Spring 3/1 to 6/1 Lb/Acre	6/2 to 7/31	Fall 8/1 to 10/1 Lb/Acre	10/2 to 11/14	Dormant 11/15 to 3/1 Lb/Acre
Alta or KY 31 Tall Fescue	100	Do Not Seed	100	Do Not Seed	100
Perennial Ryegrass	50		50		50
Creeping Red Fescue	40		40		40
Redtop	10		10		10
Spring Oats	50		0		0
Winter Wheat	0		50		50

- (b) Fertilizer and agricultural ground limestone shall be uniformly spread over the designated areas immediately prior to seedbed preparation at the following rates per acre:

120 lb. of Nitrogen Fertilizer Nutrients (N)
120 lb. of Phosphorus Fertilizer Nutrients (P)
120 lb. of Potassium Fertilizer Nutrients (K)
2 tons of Agricultural Ground Limestone

- (c) Straw mulch shall be applied to seeded areas at the rate of 2 tons per acre of Method 2.

Basis of Payment. This work shall be paid for at the contract unit price per acre for SEEDING CLASS 2 (MODIFIED); at the contract unit price per pound for NITROGEN FERTILIZER NUTRIENT, PHOSPHORUS FERTILIZER NUTRIENT, AND POTASSIUM FERTILIZER NUTRIENT; at the contract unit price per time for AGRICULTURAL GROUND LIMESTONE; and the contract unit price per acre for MULCH, METHOD 2.

TEMPORARY SEEDING AND MULCH

Effective 1984 Revised 9/1/99

This work shall be performed in accordance with Sections 250 and 251 of the Standard Specifications, as shown in the plans, and as follows:

- (a) Class 7 Seeding (Temporary Turf Cover Mixture) shall be used as a temporary erosion control method when permanent seeding cannot be accomplished so as to limit the surface area of erodible earth material exposed by clearing, grubbing, excavation, borrow, and embankment operations. The following seed mixtures and rates per acre shall be used during the time of year indicated:

	Spring 3/1 to 7/31	Fall 8/1 to 11/15	Winter 11/15 to 2/28
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Seed Mixture	Lb/Acre	Lb/Acre	
Perennial Ryegrass	50	50	Temporary Straw Mulching Only
Spring Oats	64	0	
Winter Wheat	0	64	

- (b) Fertilizer and agricultural ground limestone shall be uniformly spread over the designated areas immediately prior to seed bed preparation at the following rates per acre:

40 lb. of Nitrogen Fertilizer Nutrients (N)
0 lb. of Phosphorus Fertilizer Nutrients (P)
0 lb. of Potassium Fertilizer Nutrients (K)
0 tons of Agricultural Ground Limestone

- (c) Straw mulch shall be applied to all seeded areas at the rate of 2 tons per acre of Method 2.

STONE RIPRAP DITCH

This item consists of breaking up the existing paved concrete ditch, excavating the side slopes, furnishing, transporting, and placing stone riprap. This work shall be performed in accordance with the applicable portions of Sections 281 and 1005 of the Standard Specifications, as shown in the plans, and as specified herein.

The existing paved concrete ditch shall be broken in place, at locations shown in the schedule and plan, so that the broken concrete pieces shall not exceed 12" in the largest dimension. The broken concrete shall remain in place.

The earth side slopes adjacent to the paved ditch shall be excavated so as to allow placement of the riprap and any trees that interfere with preparation of the side slopes shall be removed. The excavated material shall be disposed of in accordance with Article 281.05.

The stone riprap shall be A3 and shall be placed over and adjacent to the existing broken concrete as shown in the plans. The finished side slopes of the stone riprap ditch shall match the existing grade.

This work will be paid for at the contract unit price per ton for STONE RIPRAP DITCH, and shall include the price of breaking the existing paved concrete ditch, excavating the side slopes, and furnishing, transporting, and placing stone riprap.

PREPARATION OF AGGREGATES

Effective 1985
9-406MT2-85

Add the following to the second paragraph of Article 406.09:

The maximum allowable moisture in any one hot bin shall be 0.3% by weight for batch type plants and for continuous mix plants. For drum mixing plants, the limitation shall be 0.5% moisture in the mixture as discharged from the drum.

DELINEATORS

Revised 6/11/02

This work consists of furnishing and installing flexible delineator posts. The posts shall consist of a two-piece post system.

The two-piece post will meet the following requirements:

The post shall be 2½" in diameter and approximately 62" in length. A tubular metal sleeve for ground embedment, 18" in length shall be required.

The post shall be constructed of impact resistant polyethylene tubing capable of self-erecting after 10 vehicle impacts at a temperature of 0°F or above without loss of serviceability. Impacts shall be made at an angle of 25° (±5°) at a vehicle speed of 50 MPH. An inner support tube to aid in recovery after impact shall be provided. The ground anchor of heavy gauge galvanized steel, approximately 18" long with bottom end flattened for driving convenience, will be required for each post.

The top of each post shall be flattened to accommodate the required sheeting.

The posts shall be white or yellow with a matching strip of 3"x12" of high intensity reflective sheeting. Posts located on the right side shall be white; posts located on the left side shall be yellow.

Post placement shall be in accordance with Standard 635001.

The furnishing and installation of flexible delineator posts shall be paid for per each as DELINEATORS.

PAVEMENT PATCHING

Add the following to Article 442.06(a)(3) of the Standard Specifications:

"The Contractor shall drill a minimum of four cores during the first 50 square yards of patching through dowel bars or tie bars in the existing pavement using procedures and equipment that shall provide undamaged, undistorted cores of a diameter of no less than 3½ inches. Subsequently one core will be required every 400 square yards. The Engineers will designate the locations where cores will be taken. If the dowel bar or tie bar is not bonded sufficiently to the existing concrete additional cores may be required to determine the extent of the deficiency. Any patches where the bars are not bonded to the existing pavement will be removed and replaced at the Contractor's expense. If in the removal process it is discovered that more than 90% of the bars are in fact bonded sufficiently to the existing concrete, the removal and replacement patch will be measured for payment at the concrete unit price for the type of patch specified. All core holes will be filled with cement grout or other patching mixture meeting the approval of the Engineer."

Add the following to Article 442.11 of the Standard Specifications:

"The cost of coring dowel bars or tie bars and the subsequent patching of core holes will not be paid for separately, but shall be considered included in the unit price bid for CLASS B PATCHES."

Calcium chloride accelerator will not be allowed in Class A patch mix. Overnight lane closure will be allowed for Class A patches.

PATCHING (PARTIAL DEPTH)

Description. This work shall consist of partial depth removal of the existing PCC pavement. This work does not include partial depth patching on bridge decks.

Materials. Portland cement concrete shall be according to Section 1020.

Equipment. The machine used for milling shall be a self-propelled milling machine capable of milling to the specified depth without damaging the adjacent pavement that is to remain in place. A wheel saw according to Article 442.03 (h) of the Standard Specifications may also be used for partial depth pavement removal. When required, the concrete saw shall be according to Article 442.03 (g) of the Standard Specifications, except it shall be equipped with a blade of sufficient diameter to saw the pavement to the thickness required in the plans. Cleaning equipment shall be a mechanical sweeper according to Article 1101.03 of the Standard Specifications or air equipment capable of applying compressed air, at a minimum 690 kPa (100 psi), and shall have sufficient flow rate to remove all disturbed pavement debris. Air equipment shall meet the requirements of ASTM D 4285.

CONSTRUCTION REQUIREMENTS

General. Disposal of waste materials shall be according to Article 202.03 of the Standard Specifications.

Partial depth removal of the pavement shall be accomplished by the use of a milling machine and/or the wheel saw. The minimum patch dimension shall be 2 feet X 2 feet. Debris from the milling or wheel saw operation shall be removed from the patch area by air equipment or mechanical sweeper and shall remove all disturbed pavement debris and any loose and/or unsound concrete. Exposed reinforcement shall be removed back to the point where the steel is in contact with sound PCC concrete. Where high steel is encountered, the depth of milling may be reduced as directed by the Engineer.

When the Engineer determines the exposed pavement will be suitable for a partial depth patch, then prepared patch shall be filled with Portland cement concrete. The Portland cement concrete shall be to the satisfaction of the Engineer.

When the Engineer determines the exposed pavement will not be suitable for a partial depth patch, or removal is one half or more of the pavement thickness, the Contractor shall remove the remaining portion of the pavement and place a full depth patch according to Section 442 of the Standard Specifications for the Class of full depth patches included in the contract. The partial removal shall be included in the cost of the full depth patch.

Method of Measurement. Partial depth patches will be measured in place and the area computed in square yards.

Basis of Payment. Partial depth patching will be paid for at the contract unit price per square yard for PAVEMENT PATCHING (PARTIAL DEPTH) which price shall be payment for pavement removal, bituminous binder course or concrete, and all other materials and work necessary to complete the patch.

PORTABLE CHANGEABLE MESSAGE SIGNS

This work consists of furnishing, placing, and maintaining changeable message sign(s) at the location(s) shown on the plans or as directed by the Engineer.

This work shall be according to Recurring Special Provision #29 and the following:

A total of 6 changeable message signs shall be required in this contract. The number of signs in use will be determined by the location of the work and the work item.

The signs shall be moved as work progresses. The Contractor will be required to relocate each sign multiple times during the contract at his or her expense.

The exact location of the placement of these signs shall be determined in the field by the Engineer.

The message sign shall have cellular capabilities in order that the messages can be changed from a remote location. Three cellular phones will be provided to the Department. The base station shall be capable of operating a minimum of six message signs.

Any additional changeable message signs requested by the Engineer will not require additional phones.

All equipment must receive prior approval from the Resident Engineer.

Cellular service shall be included in the cost of the changeable message sign, except the Department will pay that portion of each monthly telephone bill in excess of \$50.

All message signs, computer equipment, etc. as described herein shall become the property of the Contractor after completion of the project.

The Engineer shall be provided an additional licensed software package for use on an existing DOS or Windows based computer.

The furnishing, placing, moving, and maintaining of Portable Changeable Message Sign(s) shall be paid for per calendar month as CHANGEABLE MESSAGE SIGN.

TIMBER CURB

This item includes the installation of timber curb throughout the limits of existing guardrail as noted in the plans.

The timber material for this work shall be as noted in the plans, the hardware and mastic sealant for joints shall be in accordance with the Standard Specifications.

All connections and joint splices shall be made in such a manner that there shall be no projection on the road side past the face of guardrail.

This work shall be measured and paid for at the contract unit price per foot for TIMBER CURB. This price shall include all material, hardware, and storage if necessary.

APPROACH SLAB REPAIR

Effective: March 13, 1997

Description.

This work shall consist of bituminous surface removal, when required, the removal and disposal of all loose and deteriorated concrete and the replacement with new concrete to the original top of approach slab. The work shall be done according to the applicable requirements of Sections 501, 503 and 1020 of the Standard Specifications and this Special Provision.

Approach slab repairs will be classified as follows:

- (a) Partial-Depth. Partial-depth repairs shall consist of removing the loose and unsound approach slab concrete, disposing of the concrete removed and replacing with new concrete. The removal may be performed by chipping with power driven hand tools or by hydro-equipment. The depth shall be measured from the original concrete, at least 3/4 inch but not more than 5-1/2 inches unless otherwise specified on the plans.
- (b) Full-Depth. Full-depth repairs shall consist of removing concrete full-depth of the slab, disposing of the concrete removed, and replacing with new concrete to the original approach slab surface. The removal may be performed with power driven hand tools or by hydro-equipment.

Materials.

All materials shall comply with the requirements of Sections 503 and 1020 of the Standard Specifications.

Concrete for partial and full-depth repairs shall be proportioned and mixed according to the applicable portions of Section 1020 of the Standard Specifications except as follows:

No calcium chloride will be permitted in the mix.

	Per Bag of Cement Lbs.	Per Cu. Yd. of Concrete Lbs.
Portland Cement	94	735
Fine Aggregate*	170	1,326
Coarse Aggregate*	175	1,365
Water*	42	325
	4.9 gals.	39.2 gals.
Air Entrainment	6 to 9%	6 to 9%

*Based on saturated surface-dry aggregate with a specific gravity of 2.65. The mix will be adjusted by the Engineer to compensate for aggregate specific gravity and moisture. Coarse aggregate shall be gradation CA 13, CA 14 or CA 16, subject to approval of the mix design. Fine aggregate shall be gradation FA 1 or FA 2.

Grout. The grout for bonding new concrete to old concrete shall be proportioned with equal parts by mass (weight) of Portland cement and sand, mixed with sufficient water to form a slurry. The grout may be ready-mixed or mixed at the job site. The bonding grout shall have a consistency allowing it to be scrubbed onto the prepared surface with a stiff brush or broom leaving a thin, uniform coating that will not run or puddle in low spots.

Equipment.

The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

- (a) Surface Preparation Equipment. Surface preparation and concrete removal equipment shall comply with the applicable portions of Section 1100 of the Standard Specifications and the following:
 - (1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
 - (2) Blast Cleaning Equipment. The blast cleaning may be performed by wet sandblasting, high-pressure waterblasting, abrasive blasting, or other methods approved by the Engineer. Blast cleaning equipment shall be capable of removing rust and old concrete from exposed reinforcement bars. Oil traps will be required.
 - (3) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 45 pound class. Chipping hammers heavier than a nominal 15 pound class shall not be used for removing concrete from below any reinforcing bar for partial depth repairs or final removal at the boundary of full-depth repairs. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.
 - (4) Hydro-Scarification Systems. The hydro-scarification equipment shall consist of filtering and pumping units operating with a remote-controlled robotic device. The equipment may use river, stream or lake water. Operation of the equipment shall be performed and supervised by qualified personnel certified by the equipment manufacturer. Evidence of certification shall be presented to the Engineer. The equipment shall be capable of removing concrete to the specified depth and

removing rust and concrete particles from exposed reinforcing bars. Hydro-scarification equipment shall be calibrated before being used and shall operate at a minimum of 18,000 psi.

- (b) Concrete Equipment. Equipment for proportioning and mixing the concrete shall comply with the applicable requirements of Section 1103 of the Standard Specifications.
- (c) Placing and Finishing Equipment. Placing and finishing equipment shall be according to Article 503.17 of the Standard Specifications. Adequate hand tools will be permitted for placing and consolidating concrete in the patch areas and for finishing small patches.

Construction Requirements.

- (a) Bituminous Surface Removal.

The bituminous concrete surface course shall be removed and disposed of according to applicable portions of Articles 440.03 and 440.06 of the Standard Specifications. If the overlay contains asbestos fibers, removal shall be according to the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Bituminous Concrete Surface Removal". Removal of the bituminous surface by the use of radiant or direct heat will not be permitted.

- (b) Surface Preparation.

All loose, disintegrated and unsound concrete shall be removed from portions of the approach slab shown on the plans or as designated by the Engineer. The Engineer will determine the limits of removal as the work progresses.

If the Contractor elects to use hydro-scarification equipment, he/she shall be responsible for collecting and properly disposing of the runoff water generated. Runoff water will not be allowed to constitute a hazard on adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

The Contractor shall take care not to damage reinforcement bars or expansion joints which are to remain in place. Any damage to reinforcement bars or expansion joints shall be corrected at the Contractor's expense. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

- (1) Partial-Depth. Areas to be repaired will be determined and marked by the Engineer. A concrete saw shall be used to provide vertical edges approximately 3/4 inch deep around the perimeter of the area to be patched when an overlay is not specified. Where high steel is present, the depth may be reduced as directed by the Engineer. A saw cut will not be required on those boundaries along the face of the curb, parapet or joint or when sharp vertical edges are provided by hydro-scarification. The saw cut may be omitted if the deck is to receive an overlay.

The loose and unsound concrete shall be removed by chipping, with power driven hand tools or by hydro-equipment. All exposed reinforcing bars and newly exposed concrete shall be thoroughly blast cleaned. Where, in the judgment of the Engineer, the bond between existing concrete and reinforcement steel within the patch area has been destroyed, the concrete adjacent to the bar shall be removed to a depth that will permit new concrete to bond to the entire periphery of the exposed bar. A

minimum of 1 inch clearance will be required. The Engineer may require enlarging a designated removal area should inspection indicate deterioration beyond the limits previously designated. In this event, a new saw cut shall be made around the extended area before additional removal is begun. The removal area shall not be enlarged solely to correct debonded reinforcement or deficient lap lengths.

- (2) Full-Depth. Concrete shall be removed as determined by the Engineer within all areas designated for full-depth repair and in all designated areas of partial depth repair in which unsound concrete is found to extend below a depth of 5-1/2 inches unless otherwise specified on the plans. Full depth removal shall be performed according to Article 501.03 of the Standard Specifications. A concrete saw shall be used to provide vertical edges approximately 3/4 inch deep around the perimeter of the area to be patched when an overlay is not specified. A saw cut will not be required on those boundaries along the face of the curb, parapet or joint or when sharp vertical edges are provided by hydro-scarification. The saw cut may be omitted if the deck is to receive an overlay.

All voids under full depth repair areas shall be filled with a suitable material that meets the approval of the Engineer.

- (3) Reinforcement Treatment. Care shall be exercised during concrete removal to protect the reinforcement bars from damage. Any damage to the reinforcement bars to remain in place shall be repaired or replaced to the satisfaction of the Engineer at the Contractor's expense. All existing reinforcement bars shall remain in place except as herein provided for corroded bars. Tying of loose bars will be required. Any existing reinforcement bars which have a loss of more than 25% of their cross section through corrosion shall be replaced in kind with new steel as directed by the Engineer. No welding of bars will be permitted and new bars shall be lapped a minimum of 32 bar diameters to existing bars. An approved "squeeze type" mechanical bar splicer capable of developing in tension at least 125% of the yield strength of the existing bar shall be used when it is not feasible to provide the minimum bar lap.
- (4) Cleaning. Immediately after completion of the concrete removal and reinforcement repairs, the repair areas shall be cleaned of dust and debris. Once the initial cleaning is completed, the repair areas shall be thoroughly blast cleaned to a roughened appearance free from all foreign matter. Particular attention shall be given to removal of concrete fines. Any method of cleaning which does not consistently produce satisfactory results shall be discontinued and replaced by an acceptable method. All debris, including water, resulting from the blast cleaning shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final cleaning, the area shall be carefully protected with well-anchored polyethylene sheeting.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, or other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer.

(c) Placement and Finishing of Concrete Repair.

(1) Grout Placement. After the repair areas have been cleaned and immediately prior to concrete placement, the grout shall be applied to a dampened surface. A thin layer of grout shall be thoroughly scrubbed into the deck surface. All vertical as well as horizontal surfaces shall receive a thorough, even coating. The rate of grout placement shall be limited so the brushed grout does not dry out before it is covered with concrete. Grout that has become dry and chalky shall be blast cleaned and replaced at the Contractor's expense. No concrete shall be placed over dry grout.

(2) Concrete Placement.

The concrete shall be placed and compacted according to Article 503.07 of the Standard Specifications and as herein specified.

All concrete shall be vibrated internally with hand-held vibrators. When an overlay system is not specified, the patches shall be finished according to Article 503.17 of the Standard Specifications, followed by a light brooming.

(d) Curing.

Concrete patches shall be cured by the Wetted Burlap Method as per Article 1020.13 of the Standard Specifications. The curing period shall be 72 hours followed by a 72-hour minimum drying period before scarifying or surfacing.

(e) Opening to Traffic.

No traffic or construction equipment will be permitted on the repairs until after the specified cure period and the concrete has obtained a minimum compressive strength of 4,000 psi or flexural strength of 675 psi unless permitted by the Engineer.

Method of Measurement.

When specified, bituminous surface removal and full or partial depth repairs will be measured for payment and computed in square yards.

Basis of Payment.

The bituminous concrete surface removal will be paid for at the contract unit price per square yard for BITUMINOUS CONCRETE REMOVAL (DECK). Areas removed and replaced up to and including a depth of 5-1/2-inch or as specified will be paid for at the contract unit price per square yard for APPROACH SLAB REPAIR (PARTIAL). Areas requiring removal greater than a depth of 5-1/2-inch shall be removed and replaced full depth and will be paid for at the contract unit price per square yard for APPROACH SLAB REPAIR (FULL DEPTH).

When corroded reinforcement bars are encountered in the performance of this work and replacement is required, the Contractor will be paid according to Article 109.04 of the Standard Specifications.

No payment will be allowed for removal and replacement of reinforcement bars damaged by the Contractor in the performance of his/her work or for any increases in dimensions needed to provide splices for these replacement bars.

Removal and disposal of asbestos waterproofing and/or asbestos bituminous concrete will be paid for as specified in the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Bituminous Concrete Surface Removal".

REMOVE AND REPLACE STEEL PLATE BEAM GUARDRAIL, SPECIAL

The existing guardrail shall be unbolted from the existing timber curb. It shall then be vertically adjusted to meet the height requirement shown on standard 630001.

The existing steel block-outs shall be replaced with wooden block-outs. The Wood block-outs shall be according to standard 630001.

The existing steel posts may be drilled to match the bolt pattern shown on standard 630001 for the wood block-out or a new steel post shall be provided.

The existing rail elements shall be replaced with new rail elements according to standard 630001.

Once the work is completed, the posts shall be re-bolted to the timber curb.

Any existing timber curb dislodged or damaged during operations shall be replaced at the contractors expense.

This work will be paid for at the contract unit price per foot for REMOVE AND REPLACE STEEL PLATE BEAM GUARDRAIL, SPECIAL. This work shall include all material and all the items mentioned above.

TEMPORARY CONCRETE BARRIER RELOCATION

Effective 1988 Revised 6/10/02

This item shall be performed in accordance with the plans, the applicable portions of Section 704 of the Standard Specifications, and as specified herein.

The Contractor shall plan the operations involved in removing and relocating the temporary concrete barrier so as to minimize the period when the work zone will be unprotected; and to assure that, in the opinion of the Engineer, sufficient barrier will be in place at the end of each work day to shield traffic from all hazards. During the relocation operations, cones, drums or barricades shall be placed at 3 meter (10 foot) centers across all gaps in the barrier.

Prior to the relocation of the temporary concrete barrier from its initial location, the Contractor shall submit and obtain the Engineer's approval of a work plan for relocating the barrier which will meet the above requirements. The Engineer may require the Contractor to first furnish and install separate additional temporary concrete barrier of sufficient length to assure that the remaining needed barrier can be relocated from the initial installation in one daylight period.

Any additional barrier which must be furnished shall be paid for at the contract unit price per lineal meter for RELOCATE TEMPORARY CONCRETE BARRIER. No additional compensation will be allowed on account of the above requirements.

VERTICAL ADJUSTMENT OF GUARDRAIL

Description. This work shall consist of raising existing guardrail to the proper height above the shoulders, as shown in Standard 630001. The work shall be performed in accordance with the applicable portions of Section 630 and 633 of the Standard Specifications, as shown in the plans, and as specified herein. This work shall also consist of unfastening the existing timber curb from the posts of the steel plate beam guardrail to be adjusted. Once the guardrail has been adjusted to the proper height, the timber curb shall be refastened in accordance with the details shown in the plans.

Construction Requirements. Vertical adjustment of the guardrail shall be done by mechanical means as approved by the Engineer. Any damage to the rail, posts, timber curb, or hardware caused by the Contractor's operations shall be repaired or replaced at the Contractor's expense. Replacement material shall meet the requirements of Section 630.02 of the Standard

Specifications. Any disturbance to the shoulder or slope resulting from the guardrail adjustment shall be restored to its original condition as directed by the Engineer.

Method of Measurement. Vertical adjustment of the existing steel plate beam guardrail will be measured for payment in feet. The length measured will be the overall length of the rail being adjusted measured along the top edge of the rail element, from center to center of posts within the limits shown on the plans.

Basis of Payment. The work will be paid for at the contract unit price per foot for VERTICAL ADJUSTMENT OF GUARDRAIL. This price shall include the cost of all material, equipment, and labor to complete the work as specified above.

PROGRESS SCHEDULE

Effective September 1, 2001

Description. This work shall consist of preparing, revising and updating a detailed progress schedule based upon the Critical Path Method (CPM). This work shall also consist of performing time impact analysis of the progress schedule based upon the various revisions and updates as they occur.

Requirements. The software shall be Primavera SureTrak 3.0 Project Manager, published by Primavera Systems, Inc.

Format. The schedule format shall contain the following:

- (a) Project Name: (Optional).
- (b) Template: Construction.
- (c) Type: SureTrak: Native file format for stand-alone contracts.
- (d) Planning Unit: Day (calendar/working).
- (e) Number/Version: Original or updated number.

- (f) Start Date: Not later than ten days after execution of the contract.
- (g) Must Finish Date: Completion date for completion date contracts.
- (h) Project Title: Contract number.
- (i) Company Name: Contractor's name.

Calendars.

- (a) Completion Date Contracts. The base calendar shall show the proposed working days of the week and the proposed number of work hours per day.
- (b) Working days Contracts. The base calendar shall show the distribution of working days according to the following table:

MONTH	WORKING DAYS
May	15
June	17
July	17
August	17
September	16
October	16
November	14

The number of days shown above shall not be exceeded. The proposed number of hours to be worked per day shall also be shown. No work shall be shown during the period of December 1 and April 30.

Schedule Development. The detailed schedule shall incorporate the entire contract time. The minimum number of activities shown on the schedule shall represent the work incorporating the pay items who aggregate contract value constitutes 80 percent of the total contract value. These pay items shall be determined by starting with the pay item with the largest individual contract value and adding subsequent pay item contract values in descending order until 80 percent of the contract value has been attained. Any additional activities required to complete the contract beyond 95 percent and any additional activities required to maintain the continuity of the schedule logic shall also be shown.

The schedule shall be limited exclusively to Finish-to-Start (FS) relationships with no lead or lag duration between schedule activities. Start-to-Start (SS), Start-to-Finish (SF) or Finish-to-Finish (FF) relationships will not be allowed. Activity constraints shall not be used without the approval of the Engineer.

The following shall be depicted in the schedule for each activity:

- (a) Activity Identification (ID) Numbers. The Contractor shall utilize numerical designations to identify each activity. Numbering of activities shall be in increments of not less than ten digits.

- (b) A description of the work represented by the activity (maximum forty-five characters). The use of descriptions referring to a percentage of a multi-element item (i.e., construct deck 50%) shall not be used. Separate activities shall be included to represent different elements of multi-element items (i.e., forms, reinforcing, concrete, etc.). Multiple activities with the same work description shall include a location as part of the description.
- (c) Proposed activity duration shall be shown in whole days. The Contractor shall provide production rates to justify the activity duration. Schedule duration shall be contiguous and not interruptible.

The schedule shall indicate the sequence and interdependence of activities required for the prosecution of the work. The schedule logic shall not be violated.

Total Float shall be calculated as finish float. The schedule shall be calculated using retained logic. The Contractor shall not sequester float by calendar manipulation or extended duration. Float is not for the exclusive use or benefit of either the Department or the Contractor.

Tabular Reports:

- (a) The following tabular reports will be required with each schedule submission:

Classic Gantt

Pert with Time Scale

- (b) The heading of each tabular report shall include, but not be limited to, the project name, contract number, Contractor name, report date, data date, report title and page number.
- (c) Each of the tabular reports shall also contain the following minimum information for each activity.
 - 1) Activity ID
 - 2) Activity Description
 - 3) Original Duration (calendar day/working day)
 - 4) Remaining Duration (calendar day/working day)
 - 5) Activity Description
 - 6) Early Start Date
 - 7) Late Start Date
 - 8) Early Finish Date
 - 9) Late Finish Date
 - 10) Percent Complete
 - 11) Total Float

12) Work performed by DBE Subcontractors and Trainees shall be shown in the Gantt Report.

(d) Reports shall be printed in color on 8.5 in. x 14 in. (minimum) size sheets. The Classic Gantt shall show all columns, bars, column headings at the top, time scale at the top and shall show relationships.

Submission Requirements. The initial schedule shall be submitted prior to starting work but no later than five calendar days after execution of the contract. Updated schedules shall be submitted according to Article 108.02 except that as a minimum, updated schedules will be required at the 25, 50, and 75 percent completion points of the contract.

The schedule shall be submitted in the Sorted by Activity Layout (SORT4). The activities on the schedule shall be plotted using early start, late start, early finish, late finish and total float.

For every schedule submission, the Contractor shall submit to the Engineer, four IBM compatible compact disks of all schedule data. Included on the disks shall be all of the tabular and graphic reports, network diagrams and bar chart data. Two copies shall be submitted on CD/R disks and two copies shall be submitted on CD/RW disks. In addition, four plots of the schedule shall be submitted with the disks. When reviewed and approved by the Engineer, the CD/R disks will be the approved initial or revised progress schedule for the contract. The approval will be documented by the Engineer on a corresponding plot of the schedule and returned to the Contractor.

Four copies of each schedule submission shall be printed in color on 8.5 in. x 14 in. (minimum) size sheets showing all columns, bars, column headings at the top, time scale at the top and showing relationships.

The schedule shall indicate the critical path to contract completion. Only one controlling item shall be designated at any point in time on the schedule.

Basis of Payment. This work will not be paid for separately, but shall be considered as included in the cost of the various items of work in the contract.

INCENTIVE/DISINCENTIVE

Date of Completion: The Contractor shall schedule his/her operations so as to complete all work and open all the roadway to traffic on or before November 1, 2003. The Contractor shall note that this completion date is based on an expedited work schedule.

Failure to Complete the Work on Time: Should the Contractor fail to complete the work on or before the specified date of completion or within such extended time allowed by the Department, the Contractor shall be liable to the Department in the amount of \$8,000, not as a penalty, but as liquidated and ascertained damages for each calendar day beyond the date of completion or extended time as may be allowed. Such damages may be deducted by the Department from any monies due the Contractor.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work because the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of use of the roadway if the project is delayed in completion. The Department shall not be required to provide any actual loss to recover these liquidated damages provided herein, as these damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is every day on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later. No payment will be paid for any day less than twenty-four hours.

Incentive Payment Plan: The nature of this project is such that the use of this roadway cannot be safely and efficiently used until all specified work is complete. On this basis, the Contractor shall be entitled to an Incentive Payment for the completion of all work as set forth by the date of completion.

The Incentive Payment shall be paid at the rate of \$8,000 per calendar day for each day of completion prior to November 1, 2003. The maximum payment under this incentive plan will be limited to 30 calendar days.

A calendar day is every day on the calendar and starts 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later. No payment will be paid for any day less than twenty-four hours.

Should the Contractor be delayed in the commencement, prosecution, or completion of the work for any reason, there shall be no extension of the incentive payment calculation date even though there may be granted an extension of time for completion of the work unless significant extra work is added to the contract by the Department. No Incentive Payment will be made if the Contractor fails to complete the work before the specified date of completion or within such extended time allowed by the Department. Failure of the Contractor to complete all work as required by the contract before November 1, 2003, shall release and discharge the State, the Department and all of its officers, agents, and employees from any and all claims and demands for the payment of any incentive amount or damages arising from the refusal to pay any incentive amount.

If the contract is part of a combination award, no Incentive Payment shall commence on this contract which is part of the combination until all work on contracts which are part of the combination award has been completed.

SUPERPAVE BITUMINOUS CONCRETE MIXTURES

All work shall be according to the BDE Special Provision for Superpave Bituminous Concrete Mixtures except the minimum compacted lift thickness for constructing the bituminous concrete binder course (mixture IL-19.0) specified in Table 4 will be 1 3/4". The 3.5" bituminous concrete binder course will be placed in two 1 3/4" lifts as specified on the typical section sheets in the plans.

ALLOWABLE LANE DIFFERENTIAL (BDE)

Effective: July 1, 2002

Revise the first sentence of the third paragraph of Article 701.04(b)(1) of the Standard Specifications to read:

“The maximum allowable differential in elevation between adjacent open traffic lanes shall be 57 mm (2 1/4 in.).”

80076

BITUMINOUS CONCRETE SURFACE COURSE

Effective: April 1, 2001

For bituminous surface course mixture only, revise the 5th paragraph of Article 406.23 of the Standard Specifications to read:

“The metric tons (tons) paid for surface course mixture will be calculated using the following formula:

METRIC TONS(TONS) PAID= METRIC TONS (TONS) PAID is based on weight tickets required by the 4th paragraph of this Article but shall not exceed 103 percent of the Adjusted Plan Quantity. The Adjusted Plan Quantity is calculated as follows:

Adjusted Plan Quantity = C x quantity shown on plans or as specified by the Engineer.

Nomenclature: (Metric)

$$C = \frac{(d) \times 999.6 \times 0.025}{59.8} = (d)(0.4179)$$

d = G_{mb} = average bulk specific gravity (d) from approved mix design.
59.8 = Constant; unit weight of surface course shown on the plans, in kg/sq m/25 mm, used to estimate plan quantity.
999.6 = Constant; for conversion.
0.025 = Constant; for conversion.

Nomenclature: (English)

$$C = \frac{(d) \times 62.4 \times 0.75}{112.0}$$

- d = G_{mb} = average bulk specific gravity (d) from approved mix design.
112.0 = Constant; unit weight of surface course shown on the plans, in lbs./sq.yd./in.,
used to estimate plan quantity.
62.4 = Constant; for conversion.
0.75 = Constant; for conversion.

If project circumstances warrant a new surface course mix design, the above formulae shall be used to calculate the METRIC TONS (TONS) PAID for tonnage placed using each respective mix design.”

80050

CALCIUM CHLORIDE ACCELERATOR FOR PORTLAND CEMENT CONCRETE PATCHING (BDE)

Effective: January 1, 2001

The Contractor has the option to use a calcium chloride accelerator for Class PP-1 or Class PP-2 concrete.

80031

CHAIR SUPPORTS (BDE)

Effective: November 1, 2002

Revised: November 2, 2002 |

Revise the fourth and fifth paragraphs of Article 421.06(a) to read:

“Pavement reinforcement shall be supported on steel chair supports at the depth below the pavement surface as indicated on the plans. The Contractor shall submit prints of shop drawings showing details of chair supports and their spacing to the Engineer and obtain the Engineer’s approval before any fabrication is begun. |

The chair supports shall possess the necessary rigidity and be spaced at intervals close enough to hold the reinforcement at the proper depth and position. However, the spacing of the chair supports shall not exceed 900 mm (3 ft) transversely or 1.2 m (4 ft) longitudinally. The chair supports shall be fabricated with sand plates.”

80077

CONCRETE ADMIXTURES (BDE)

Effective: January 1, 2003

Revise the sixth paragraph of Article 1020.05(b) of the Standard Specifications to read:

“The maximum slumps given in Table 1 may be increased to 175 mm (7 in.) when a high range water-reducing admixture is used for all classes of concrete except Class PV and PP.”

Revise Section 1021 of the Standard Specifications to read:

“SECTION 1021. Concrete Admixtures

1021.01 General. Admixtures shall be furnished in liquid form ready for use. The admixtures may be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer and trade name of the material. In all cases, containers shall be readily identifiable to the satisfaction of the Engineer as to manufacturer and trade name of the material they contain.

Prior to inclusion of a product on the Department's Approved List of Concrete Admixtures, the manufacturer shall submit a report prepared by an independent laboratory accredited by the AASHTO Accreditation Program. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications.

Tests shall be conducted using materials and methods specified on a "test" concrete and a "reference" concrete, together with a certification that no changes have been made in the formulation of the material since the performance of the tests. The report shall also include water contents and results of set time tests according to AASHTO T 197 that were conducted on both a test and reference concrete, using cement from the source that is used as a standard by the Bureau of Materials and Physical Research. The cement content for all required tests shall either be according to applicable specifications or 335 kg/cu m (5.65 cwt/cu yd). Compressive strength test results for six months and one year will not be required.

Prior to the approval of an admixture, the Engineer may conduct all or part of the applicable tests on a sample that is representative of the material to be furnished. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 335 kg/cu m (5.65 cwt/cu yd).

The manufacturer shall submit certification, both initially and annually thereafter, giving the following information according to ASTM C 494; the average and manufacturing range of specific gravity, the average and manufacturing range of solids in the solution, and the average and manufacturing range of pH. The initial and annual certifications shall further state that all admixtures, except chloride-based accelerators, shall contain no more than 0.3 percent chloride by mass. The initial submittal shall also include an infrared spectrophotometer trace no more than five years old.

Annual re-submittals will be required and shall include certification that no changes have been made in the formulation since it was initially approved. The certification shall state that the admixture is the same as previously approved, and the Engineer may conduct such tests as deemed desirable to check the properties of the material before re-approval is granted.

When test results are more than seven years old, the manufacturer shall re-submit the infrared spectrophotometer trace and the report prepared by an independent laboratory that is accredited by AASHTO Accreditation Program.

1021.02 Air-Entraining Admixtures. Air-entraining admixtures shall conform to the requirements of AASHTO M 154.

If the manufacturer certifies that the air-entraining admixture is an aqueous solution of Vinsol resin that has been neutralized with sodium hydroxide (caustic soda), testing for compliance with the requirements may be waived by the Engineer. In the certification, the manufacturer shall show complete information with respect to the formulation of the solution, including the number of parts of Vinsol resin to each part of sodium hydroxide. Before the approval of its use is granted, the Engineer will test the solution for its air-entraining quality in comparison with a solution prepared and kept for that purpose.

1021.03 Retarding and Water-Reducing Admixtures. The admixture shall comply with the following requirements:

- (a) The retarding admixture shall comply with the requirements of AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
- (b) The water-reducing admixture shall comply with the requirements of AASHTO M 194, Type A.
- (c) The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

When a Type F or Type G high range water-reducing admixture is used, water-cement ratios shall be a minimum of 0.32.

Type F or Type G admixtures may be used, subject to the following restrictions:

For Class MS, SI, RR, SC and SH concrete, the water-cement ratio shall be a maximum of 0.44.

The Type F or Type G admixture shall be added at the jobsite unless otherwise directed by the Engineer. The initial slump shall be a minimum of 40 mm (1 1/2 in.) prior to addition of the Type F or Type G admixture, except as approved by the Engineer.

When a Type F or Type G admixture is used, retempering with water or with a Type G admixture will not be allowed. An additional dosage of a Type F admixture, not to exceed 40 percent of the original dosage, may be used to retemper concrete once, provided set time is not unduly affected. A second retempering with a Type F admixture may be used for all classes of concrete except Class PP and SC, provided that the dosage does not exceed the dosage used for the first retempering, and provided that the set time is not unduly affected. No further retempering will be allowed.

Air tests shall be performed after the addition of the Type F or Type G admixture.

1021.04 Set Accelerating Admixtures. The admixture shall comply with the requirements of AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating)”

80094

CONTROLLED AGGREGATE MIXING SYSTEM (BDE)

Effective: November 1, 2002

Revise the fourth sentence of the first paragraph of Article 311.05(b) of the Standard Specifications to read:

“The water and granular material shall be mixed through a controlled aggregate mixing system. The system shall consist of a mechanical mixing device and aggregate and water measuring devices, meeting the approval of the Engineer.”

Revise the third and fourth sentences of the fourth paragraph of Article 351.05(b) of the Standard Specifications to read:

“The water and aggregate shall be mixed through a controlled aggregate mixing system. The system shall consist of a mechanical mixing device and aggregate and water measuring devices, meeting the approval of the Engineer.”

Delete the third sentence of the first paragraph of Article 351.05(c) of the Standard Specifications.

Revise the second and third sentences of the first paragraph of Article 481.04(a) of the Standard Specifications to read:

“The water and aggregate shall be mixed through a controlled aggregate mixing system. The system shall consist of a mechanical mixing device and aggregate and water measuring devices, meeting the approval of the Engineer.”

80078

EPOXY COATING ON REINFORCEMENT (BDE)

Effective: April 1, 1997

Revised: January 1, 2003

For work outside the limits of bridge approach pavement, all references to epoxy coating in the Highway Standards and Standard Specifications for reinforcement, tie bars and chair supports will not apply for pavement, shoulders, curb, gutter, combination curb and gutter and median.

31578

EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: August 1, 2001

Revised: November 1, 2001

When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, he/she will direct the Contractor in writing to correct the deficiency. The Contractor shall then correct the deficiency within 24 hours. The deficiency may be any lack of repair, maintenance, or implementation of erosion and/or sediment control devices included in the contract, or any failure to comply with the conditions of the National Pollutant Discharge Elimination System (NPDES) Storm Water Permit for Construction Site Activities.

If the Contractor fails to correct the deficiency(s) within 24 hours, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The time period will begin with the initial written notification to the Contractor and end with the Engineer's acceptance of the corrected work. The per calendar day deduction will be either \$1000.00 or 0.05 percent of the awarded contract value, whichever is greater.

If the Contractor fails to respond, the Engineer may correct the deficiencies and deduct the cost from monies due or which may become due the Contractor. This corrective action shall in no way relieve the Contractor of his/her contractual requirements or responsibilities.

80055

FLUORESCENT ORANGE SHEETING ON DRUMS (BDE)

Effective: November 1, 2000

Revised: January 1, 2003

Revise the first sentence of the first paragraph of Article 702.03(e) of the Standard Specifications to read:

"Drums shall be nonmetallic and have alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes."

80025

FREEZE-THAW RATING (BDE)

Effective: November 1, 2002

Revise the first sentence of Article 1004.02(f) of the Standard Specifications to read:

"When coarse aggregate is used to produce portland cement concrete for base course, base course widening, pavement, driveway pavement, sidewalk, shoulders, curb, gutter, combination curb and gutter, median, paved ditch or their repair using concrete, the gradation permitted will be determined from the results of the Department's Freeze-Thaw Test."

80079

MATERIAL ALLOWANCES (BDE)

Effective: December 1, 2001

Revise the sixth paragraph of Article 109.07 of the Standard Specifications to read:

"In addition, payment may be made for materials prior to their use in the work. These material allowances may be paid at the discretion of the Department when satisfactory evidence is presented by the Contractor. Satisfactory evidence includes justification for the allowance (to expedite the work, meet project schedules, regional or national material shortages, etc.), documentation of material and transportation costs and evidence that such material is properly stored on the project or at a secure location acceptable and accessible to the Department. Material allowances will be considered only for nonperishable materials when the cost, including transportation, exceeds \$10,000 and such materials are not expected to be utilized within 60 days of the request for the allowance. For contracts valued under \$500,000, the minimum \$10,000 requirement may be met by combining the principal (material) product of no more than two contract items. An exception to this two item limitation may be considered for any contract regardless of value for items in which material (products) are similar except for type and/or size. Material allowances shall not exceed the value of the contract items in which used and shall not include the cost of installation or related markups. Amounts paid by the Department for material allowances will be deducted from estimates due the Contractor as the material is used. Two-sided copies of the Contractor's cancelled checks for materials and transportation must be furnished to the Department within 60 days of payment of the allowances or the amounts will be reclaimed by the Department."

80068

MATERIAL TRANSFER DEVICE (BDE)

Effective Date: June 15, 1999

Revised Date: March 1, 2001

Description. This work shall consist of placing bituminous concrete binder and surface course according to Section 406 of the Standard Specifications, except that these materials shall be placed using a material transfer device.

Materials and Equipment. The Material Transfer Device shall have a minimum surge capacity of 13.5 metric tons (15 tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following:

- (a) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage.
- (b) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 12.7 metric tons (14 tons).
- (c) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger or two full-length longitudinal paddle mixers designed for the purpose of re-mixing the bituminous material. The longitudinal paddle mixers shall be located in the paver hopper insert.

Construction Requirements. The material transfer device shall be used for the placement of all bituminous concrete binder and surface course mixtures placed with a bituminous paver including the ramps but excluding the shoulders. The material transfer device speed shall be adjusted to the speed of the paver to maintain a continuous, non-stop paving operation.

The material transfer device will be permitted on partially completed segments of full-depth bituminous concrete pavement if the thickness of binder in place is 250 mm (10 in.) or greater.

Structures. The Material Transfer Device may be allowed to travel over structures under the following conditions:

- (a) Approval will be given by the Engineer.
- (b) The vehicle shall be emptied of bituminous material prior to crossing the structure and shall travel at crawl speed across the structure.
- (c) The tires of the vehicle shall travel on or in close proximity and parallel to the beam and/or girder lines of the structure.

Method of Measurement. This work will be measured for payment in metric tons (tons) for bituminous concrete binder and surface course materials placed with a material transfer device.

Basis of Payment. This work will be paid for at the contract unit price per metric ton (ton) for MATERIAL TRANSFER DEVICE.

The various bituminous mixtures placed with the material transfer device will be paid for as specified in their respective specifications. The Contractor may choose to use the material transfer device for other applications on this project; however, no additional compensation will be allowed.

80045

MULTILANE PAVEMENT PATCHING (BDE)

Effective: November 1, 2002

Pavement broken and holes opened for patching shall be completed prior to weekend or holiday periods. Should delays of any type or for any reason prevent the completion of the work, temporary patches shall be constructed. Material able to support the average daily traffic and meeting the approval of the Engineer shall be used for the temporary patches. The cost of furnishing, placing, maintaining, removing and disposing of the temporary work, including traffic control, shall be the responsibility of the Contractor.

80082 |

PAVEMENT AND SHOULDER RESURFACING (BDE)

Effective: February 1, 2000

Revised: August 1, 2002

Revise Article 406.20 of the Standard Specifications to read:

“406.20 Resurfacing Sequence. The resurfacing operations shall satisfy the following requirements:

- (a) Before paving in a lane, the adjacent lane and its shoulder must be at the same elevation.
- (b) Each lift of resurfacing shall be completed, including shoulders, before the next lift is begun.
- (c) Elevation differences between lanes shall be eliminated within twelve calendar days.

Revise the first paragraph of Article 406.23 of the Standard Specifications to read:

“406.23 Method of Measurement. This work will be measured for payment according to the following:”

Revise the first sentence of the ninth paragraph of Article 406.23 of the Standard Specifications to read:

“When a Superpave Binder and Surface Course mixture is used on shoulders and is placed simultaneously with the traffic lane as specified in Section 482, the quantity of bituminous mixture placed on the traffic lane that will be paid for will be limited to a calculated tonnage based upon actual mat width and length, plan thickness or a revised thickness authorized by the Engineer, and design mix weight per millimeter (inch) of thickness.”

Delete the tenth paragraph of Article 406.23 of the Standard Specifications.

Replace the first sentence of the second paragraph Article 482.02 of the Standard Specifications with the following:

“For lifts with a thickness of 44 mm (1 3/4 in.) or greater, the aggregate used shall meet the gradation requirements for a CA 10. For lifts with a thickness less than 44 mm (1 3/4 in.) the aggregate used shall meet the gradation requirements for a CA 12.”

Revise the first paragraph of Article 482.04 of the Standard Specifications to read:

“482.04 General. For pavement and shoulder resurfacing projects, Class I Binder and Surface Course mixtures or Superpave mixtures designed at 50 gyrations or greater may be used in lieu of Bituminous Aggregate Mixture for the resurfacing of shoulders, at the option of the Contractor, or shall be used when specified in the plans.”

Replace the third sentence of the first paragraph of Article 482.05 of the Standard Specifications with the following:

“Superpave and Class I mixtures used as the top lift and other lifts less than 44 mm (1 3/4 in.) shall meet the gradation requirements for Superpave and B Binder of Surface Course mixture according to Article 406.13.”

Revise the second paragraph of Article 482.06 of the Standard Specifications to read:

“On pavement and shoulder resurfacing projects, the resurfacing sequence shall be according to Article 406.20. When the Superpave mixture option is used, the shoulders may be placed, at the Contractor’s option, simultaneously with the adjacent traffic lane for both the binder and surface courses, provided the specified density, thickness and cross slope of both the pavement and shoulder can be satisfactorily obtained.”

80013

PAVEMENT REMOVAL (BDE)

Effective: January 1, 1999

Revised: November 1, 2001

Revise the second paragraph of Article 440.02 of the Standard Specifications to read:

“The thickness of the existing pavement structure to be removed, including overlays and other appurtenances, will be shown on the plans.”

Add the following to Article 440.07 of the Standard Specifications:

- “(c) Adjustment of Quantities. Pavement removal will be adjusted if the thickness varies more than 15 percent from that shown on the plans. The quantity will be either increased or decreased according to the following chart.

<u>% change of thickness</u>	<u>% change of quantity</u>
0 to less than 15	0
15 to less than 20	10
20 to less than 30	15
30 and greater	20

When an adjustment is made for variations in pavement thickness a resulting adjustment will also be made in the earthwork quantities when applicable.

No adjustment will be made for variations in the amount of reinforcement.”

21982

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require contractors to pay subcontractors for satisfactory performance of their subcontracts within a specific number of days after receipt of each payment made to the contractor, and to require the prompt return of retainage withheld from subcontractors.

State law addresses the timing of payments to be made to subcontractors. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, generally requires that when a contractor receives any payment from the Department, the contractor is required to make corresponding, proportional payments to each subcontractor performing work within 15 calendar days after receipt of the state payment. Section 7 of the State Prompt Payment Act further provides that interest in the amount of 2% per month, in addition to the payment due, shall be paid to any subcontractor by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

As partial payments are made to the Contractor in accordance with Article 109.07 of the Standard Specifications for Road and Bridge Construction, the Contractor shall make a corresponding partial payment within 15 calendar days to each subcontractor in proportion to the work satisfactorily completed by each subcontractor. The proportionate amount of partial payment due to each subcontractor shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the partial payment to the Contractor. Subcontractors shall be paid in full, including the return of any retainage previously withheld, within 15 calendar days after the subcontractor's work has been satisfactorily completed.

This Special Provision does not create any rights in favor of any subcontractor against the State of Illinois or authorize any cause of action against the State of Illinois on account of any payment, nonpayment, delayed payment or interest claimed by application of the State Prompt Payment Act. The Department will neither determine the reasonableness of any cause for delay of payment nor enforce any claim to payment, including interest. Moreover, the Department will not approve any delay or postponement of the 15 day requirement. State law creates remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond in accordance with the Public Construction Bond Act, 30 ILCS 550.

PLACEMENT OF ARROW BOARDS (BDE)

Effective: August 1, 2001

Add the following to Article 701.04 of the Standard Specifications:

- “(g) Arrow Boards. Arrow boards shown on standards or in the plans at the beginning of tapers, shall be placed at the beginning of the taper or in the closed lane within the first 90 m (300 ft) of the taper.”

80056

PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2002

Add the following paragraph after the fourth paragraph of Article 1103.01(b) of the Standard Specifications:

- “The truck mixer shall be approved before use according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

Add the following paragraph after the first paragraph of Article 1103.01(c) of the Standard Specifications:

- “The truck agitator shall be approved before use according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

Add the following paragraph after the first paragraph of Article 1103.01(d) of the Standard Specifications:

- “The nonagitator truck shall be approved before use according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

Revise the first sentence of the first paragraph of Article 1103.02 of the Standard Specifications to read:

- “The plant shall be approved before production begins according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

80083

PORTLAND CEMENT CONCRETE PATCHING (BDE)

Effective: January 1, 2001
Revised: January 1, 2003

Revise Note 1 of Article 442.02 of the Standard Specifications, to read:

"Note 1. When patching ramp pavements and two lane pavements with two way traffic, Class PP-2, PP-3, or PP-4 concrete shall be used for Class A, Class B and Class C patching. For all other pavements, Class PP-1, PP-2, PP-3, or PP-4 concrete shall be used, at the Contractor's option, for Class A, Class B and Class C patching."

Delete Note 2 of Article 442.02 of the Standard Specifications.

Add the following to Article 442.02 of the Standard Specifications:

"(I) Calcium Chloride (Note 5) 1013.01

Note 5. The calcium chloride accelerator shall be Type L (Liquid) with a minimum of 32.0 percent by mass (weight) of calcium chloride."

Revise the first paragraph of Article 442.06(e) of the Standard Specifications to read:

"(e) Concrete Placement. For Class A, Class B and Class C Patches, concrete shall be placed according to Article 420.07 and governed by the limitations set forth in Article 1020.14, except that the maximum temperature of the mixed concrete immediately before placing shall be 35 °C (96 °F), the required use of an approved retarding admixture when the plastic concrete reaches 30 °C (85 °F) shall not apply."

Revise the first paragraph of Article 442.06(h) of the Standard Specifications to read:

"(h) Curing and Protection. In addition to Article 1020.13, when the air temperature is less than 13 °C (55 °F), the Contractor shall cover the patch with minimum R12 insulation until opening strength is reached. Insulation is optional when the air temperature is 13 °C - 35 °C (55 °F - 96 °F). Insulation shall not be placed when the air temperature is greater than 35 °C (96 °F)."

Revise the second paragraph of Article 701.05(e)(1)d.1. of the Standard Specifications to read:

"No open holes, broken pavement, or partially filled holes shall remain overnight for bituminous patching or when the Department specifies only Class PP-2, PP-3, or PP-4 concrete be used. The only exception is conditions beyond the control of the Contractor."

Revise Article 701.05(e)(2)b. of the Standard Specifications to read:

"b. Strength Tests. For patches constructed with Class PP-1, PP-2, PP-3, or PP-4 concrete, the pavement may be opened to traffic when test specimens cured with the patches have obtained a minimum flexural strength of 4150 kPa (600 psi) or a minimum compressive strength of 22,100 kPa (3200 psi) according to Article 1020.09.

For patches constructed with Class PP-2, PP-3, or PP-4 concrete which can obtain a minimum flexural strength of 4150 kPa (600 psi) or a minimum of compressive strength of 22,100 kPa (3200 psi) in 16 hours, the pavement may be opened to traffic at a lower opening strength. The specimens cured with the patches shall have obtained a minimum flexural strength of 2050 kPa (300 psi) or a minimum compressive strength of 11,000 kPa (1600 psi) according to Article 1020.09, to permit opening pavement to traffic.

With the approval of the Engineer, concrete strength may be determined according to AASHTO T 276. The strength-maturity relationship shall be developed from concrete which has an air content near the upper specification limit. The strength-maturity relationship shall be re-established if the mix design or materials are changed."

Revise Article 701.05(e)(2)c. of the Standard Specifications to read:

- "c. Construction Operations. For Class PP-2, PP-3, or PP-4 concrete used on ramp pavements and two lane pavements with two way traffic, or when the Department specifies only Class PP-2, PP-3, or PP-4 concrete be used for other pavements, Contractor construction operations shall be performed in a manner which allows the patches to be opened the same day and before nightfall. If patches are not opened before nightfall, the additional traffic control shall be at the Contractor's expense. Any time patches cannot be opened before nightfall, the Contractor shall change subsequent construction operations or the mix design. The changes shall be at no additional cost to the Department."

Revise Table 1 of Article 1020.04 of the Standard Specifications by replacing Class PP concrete with the following:

"TABLE 1. CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA				
Class of Concrete	Use	Specification Section Reference	Cement Factor kg/cu m (cwt/cu yd)	Max. Water/Cement Ratio kg/kg (lb/lb)
PP-1	PCC Pavement Patching Bridge Deck Patching	442	Type I Cement 385 to 445 (6.50 to 7.50) Type III Cement 365 to 425 (6.20 to 7.20)	0.44
PP-2	PCC Pavement Patching Bridge Deck Patching	442	Type I Cement 435 (7.35)	0.38
PP-3	PCC Pavement Patching Bridge Deck Patching	442	Type III Cement 435 (7.35)	0.35
PP-4	PCC Pavement Patching Bridge Deck Patching	442	Rapid Hardening Cement 355 to 370 (6.00 to 6.25)	0.50

For PP-1, the Contractor has the option to replace the Type I Cement with Class C fly ash or ground granulated blast-furnace slag. The amount of cement replaced shall not exceed 15 percent by mass (weight), at a minimum replacement ratio of 1.5:1.

For PP-2, the Contractor has the option to replace the Type I cement with Class C fly ash or ground granulated blast-furnace slag. The amount of cement replaced shall not exceed 30 percent by mass (weight), at a minimum replacement ratio of 1:1.

For PP-3, in addition to the cement, 45kg (100 lb) of ground granulated blast-furnace slag and 23 kg (50 lb) of microsilica are required. For an air temperature greater than 30 °C (85 °F), the Contractor has the option to replace the Type III cement with Type I cement.

For PP-4, the cement shall be from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs".

TABLE 1. (CONT'D) CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA							
Class of Concrete	Slump, mm (in.)	Mix Design Compressive Strength, kPa (psi)		Mix Design Flexural Strength, kPa (psi)		Air Content, %	Coarse Aggregate Gradations Permitted
		Hours		Hours			
		12	48	12	48		
PP – 1	100 (4) Max	-----	22,100 (3200)	-----	4150 (600)	4.0 – 7.0	CA-7, CA-11, CA-13, CA14, or CA-16
PP – 2	150 (6) Max	11,000 (1600)	22,100 (3200)	2050 (300)	4150 (600)	4.0 – 6.0	CA-7, CA-11, CA-13, CA14, or CA-16
PP – 3	100 (4) Max	11,000 (1600)	22,100 (3200)	2050 (300)	4150 (600)	4.0 – 6.0	CA-7, CA-11, CA-13, CA14, or CA-16
PP – 4	150 (6) Max	11,000 (1600)	22,100 (3200)	2050 (300)	4150 (600)	4.0 – 6.0	CA-7, CA-11, CA-13, CA14, or CA-16

For PP-1, PP-2, PP-3 or PP-4; only CA-13, CA-14, or CA-16 may be used for bridge deck patching. In addition, the mix design strength at 48 hours shall be increased to 27,500 kPa (4,000 psi) compressive or 4,650 kPa (675 psi) flexural for bridge deck patching.

For PP-1, the slump may be increased to 150 mm (6 in.) Max if a high range water-reducing admixture is used."

Revise the first paragraph of Article 1020.05(b) of the Standard Specifications to read:

"(b) Admixtures. Except as specified, the use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted only when approved in writing by the Engineer. The Department will maintain an Approved List of Concrete Admixtures. If the Department specifies a calcium chloride accelerator, it shall be a solution according to Article 442.02, Note 5."

Replace the fourth paragraph of Article 1020.05(b) with the following seven paragraphs:

"At the Contractor's option, admixtures other than air entraining agents may be used for Class PP-1 concrete. The accelerator shall be the non-chloride type. If a water-reducing or retarding admixture is used, the cement factor may be reduced a maximum

18 kg/cu m (0.30 hundredweight/cu yd). If a high range water-reducing admixture is used, the cement factor may be reduced a maximum 36 kg/cu m (0.60 hundredweight/cu yd). Cement factor reductions shall not be cumulative when using multiple admixtures.

An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

If Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 concrete, a water-reducing or high range water-reducing admixture shall be used. However, the cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used. In addition, an accelerator shall not be used.

For Class PP-2 or PP-3 concrete; a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air entraining admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-2 or PP-3 concrete, the Contractor has the option to use a water-reducing admixture. A retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

When the air temperature is less than 13 °C (55 °F.) for Class PP-1 or PP-2 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air entraining admixture. The Contractor has the option to use a water-reducing admixture. An accelerator shall not be used. For stationary or truck mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has the option to use a mobile portland cement concrete plant according to Article 1103.04, but a retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

If the Department specifies a calcium chloride accelerator for Class PP-1 concrete, the maximum chloride dosage shall be 1.0 L (1.0 quart) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.0 L (2.0 quarts) per 45 kg (100 lb) of cement if approved by the Engineer. If the Department specifies a calcium chloride accelerator for Class PP-2 concrete, the maximum chloride dosage shall be 1.3 L (1.3 quarts) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.6 L (2.6 quarts) per 45 kg (100 lb) of cement if approved by the Engineer."

Delete Article 1020.05(g) of the Standard Specifications.

80036

PRECAST CONCRETE (BDE)

Effective: July 1, 1999

Revised: January 1, 2002

Description. This special provision identifies non-prestressed, precast concrete products which shall be produced according to the Department's current, "Quality Control/Quality Assurance Program for Precast Concrete Products".

Products. The list of products is as follows:

Product Class	Precast Item
Box Culvert	Precast Concrete Box Culverts
Pipe	Reinforced Concrete Culvert, Storm Drain and Sewer Pipe
	Concrete Sewer, Storm Drain and Culvert Pipe
	Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe
	Concrete Drain Tile
	Reinforced Concrete Arch Culvert, Storm Drain and Sewer Pipe
	Concrete Headwall for Pipe Drains
	Precast Reinforced Concrete Flared End Sections and Elliptical Flared End Sections
	Precast Reinforced Concrete Pipe Elbows, Tees and Collars
Structure	Precast Concrete Members
Block/Brick	Erosion Control: Concrete Block Riprap, Block Revetment Mat, and Articulated Block Mat
	Concrete Building Brick
	Concrete Masonry Units
Drainage Structure	Precast Reinforced Concrete Catch Basins, Manholes, Inlets, Miscellaneous Structures, Valve Vaults and Flat Slab Tops/Bottoms
Barrier	Concrete Barrier
	Temporary Concrete Barrier
Miscellaneous	Right of Way, Drainage, Section and Permanent Survey Markers, Bumper Blocks, Junction Boxes, and Handholes

For precast concrete products which are constructed according to AASHTO M 86, M 170, M 178, M 199, M 206, M 207, M 259, or M 273; portland or blended hydraulic cement shall be according to Article 1001.01 of the Standard Specifications, except the pozzolan constituent in the Type IP or Type I(PM) cement shall be fly ash. In addition, the minimum or maximum combination of a portland cement and a cementitious material shall be according to the AASHTO M specification. The cementitious material shall be according to Articles 1010.01, 1010.03, 1014.01, 1014.02, 1015.01, 1015.02, 1016.01 and 1016.02.

Acceptance. Products which have been lot or piece inspected and approved by the Department prior to July 1, 1999, will be accepted for use on this contract. Products produced on or after July 1, 1999, will be accepted only if produced according to the Department's current "Quality Control/Quality Assurance Program for Precast Concrete Products".

419.doc

PUBLIC CONVENIENCE AND SAFETY (BDE)

Effective: January 1, 2000

Add the following paragraph after the fourth paragraph of Article 107.09 of the Standard Specifications.

"On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical."

80015

RAP FOR USE IN BITUMINOUS CONCRETE MIXTURES (BDE)

Effective: January 1, 2000

Revised: April 1, 2002

Revise Article 1004.07 to read:

"1004.07 RAP Materials. RAP is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt pavement. RAP must originate from routes or airfields under federal, state or local agency jurisdiction. The Contractor shall supply documentation that the RAP meets these requirements.

(a) Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP will be allowed on top of the pile after the pile has been sealed.

(1) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only and represent the same aggregate quality, but shall be at least C quality or better, the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag), similar gradation and similar AC content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous", with a quality rating dictated by the lowest coarse aggregate quality present in the mixture. Homogenous stockpiles shall meet the requirements of Article 1004.07(d). Homogeneous RAP stockpiles not meeting these requirements may be processed (crushing and screening) and retested.

(2) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only. The coarse aggregate in this RAP shall be crushed aggregate only and may represent more than one aggregate type and/or quality but shall be at least C quality or better. This RAP may have an inconsistent gradation and/or asphalt cement content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 16 mm (5/8 in.) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate RAP stockpiles shall meet the requirements of Article 1004.07(d).

(3) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP containing coarse aggregate (crushed or round) that is at least D quality or better. This RAP may have an inconsistent gradation and/or asphalt content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate DQ RAP shall meet the requirements of Article 1004.07(d).

Reclaimed Superpave Low ESAL IL-9.5L surface mixtures shall only be placed in conglomerate DQ RAP stockpiles due to the potential for rounded aggregate.

(4) Other. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Other". "Other" RAP stockpiles shall not be used in any of the Department's bituminous mixtures.

(b) Use. The allowable use of a RAP stockpile shall be set by the lowest quality of coarse aggregate in the RAP stockpile. Class I/Superpave surface mixtures are designated as containing Class B quality coarse aggregate only. Superpave Low ESAL IL-19.0L binder and IL-9.5L surface mixtures are designated as Class C quality coarse aggregate only. Class I/Superpave binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate only. Bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate only. Any mixture not listed above shall have the designated quality determined by the Department.

RAP containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in Class I/Superpave (including Low ESAL) surface mixtures only. RAP stockpiles for use in Class I/Superpave mixtures (including Low ESAL), base course, base course widening and Class B mixtures shall be either homogeneous or conglomerate RAP stockpiles except conglomerate RAP stockpiles shall not be used in Superpave surface mixture Ndesign 50 or greater. RAP for use in bituminous aggregate mixtures (BAM) shoulders and BAM stabilized subbase shall be from homogeneous, conglomerate, or conglomerate DQ stockpiles.

Additionally, RAP used in Class I/Superpave surface mixtures shall originate from milled or crushed mixtures only, in which the coarse aggregate is of Class B quality or better. RAP stockpiles for use in Class I/Superpave (including Low ESAL) binder mixes as well as base course, base course widening and Class B mixtures shall originate from milled or processed surface mixture, binder mixture, or a combination of both mixtures uniformly blended to the satisfaction of the Engineer, in which the coarse aggregate is of Class C quality or better.

(c) Contaminants. RAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

(d) Testing. All RAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 450 metric tons (500 tons) for the first 1800 metric tons (2,000 tons) and one sample per 1800 metric tons (2,000 tons) thereafter. A minimum of five tests shall be required for stockpiles less than 3600 metric tons (4,000 tons).

For testing existing stockpiles, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP pile either in-situ or by restocking. The sampling plan shall meet the minimum frequency required above and detail the procedure used to extract representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

All of the extraction results shall be compiled and averaged for asphalt content and gradation. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	Homogeneous / Conglomerate	Conglomerate "D" Quality
25 mm (1 in.)		± 5%
12.5 mm (1/2 in.)	± 8%	± 15%
4.75 mm (No. 4)	± 6%	± 13%
2.36 mm (No. 8)	± 5%	
1.18 mm (No. 16)		± 15%
600 µm (No. 30)	± 5%	
75 µm (No. 200)	± 2.0%	± 4.0%
AC	± 0.4%	± 0.5%

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt content test results fall outside the appropriate tolerances, the RAP will not be allowed to be used in the Department's bituminous concrete mixtures unless the RAP representing the failing tests is removed from the stockpile to the satisfaction of the Engineer. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (e) Designs. At the Contractor's option, bituminous concrete mixtures may be constructed utilizing RAP material meeting the above detailed requirements. The amount of RAP included in the mixture shall not exceed the percentages specified in the plans.

RAP designs shall be submitted for volumetric verification. If additional RAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP stockpile and design, and meets all of the requirements herein, the additional RAP stockpiles may be used in the original mix design at the percent previously verified.

- (f) Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the bituminous mixture being produced.

To remove or reduce agglomerated material, a scalping screen, crushing unit or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP and either switch to the virgin aggregate design or submit a new RAP design.

80011

SAND MODULE IMPACT ATTENUATORS (BDE)

Effective: October 15, 1976

Revised: April 1, 2002

Description. This work shall consist of furnishing, erecting, and/or relocating sand module impact attenuators and the construction of attenuator bases when specified.

Impact Attenuators. Impact attenuators shall be the self purging sand module type. The modules shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 and shall be approved by the Department. The modules shall be preassembled to the greatest extent practicable so as to reduce to a minimum the on-site installation time. The attenuator installation shall be located, oriented, and the modules assembled and filled to the nominal weights as shown on the plans. Sand for filling the modules shall conform to the requirements of Article 1003.01 of the Standard Specifications for FA-1 or FA-2 Class A quality. Unbagged sand containing not more than 5 percent moisture shall be used for filling modules.

Attenuator Bases. Prior to constructing attenuator bases, the subgrade shall be prepared to the satisfaction of the Engineer.

Attenuator bases may be constructed of either portland cement concrete or bituminous at the option of the Contractor. Portland cement concrete bases shall be 150 mm (6 in.) thick and

conform to the applicable requirements of Section 424 of the Standard Specifications. Bituminous bases shall be 200 mm (8 in.) thick and conform to the applicable requirements of Section 408 of the Standard Specifications.

The surface of the base shall be slightly sloped or crowned to facilitate drainage. The perimeter of each module and the specified mass (weight) of sand in each module shall be painted on the surface of the base.

Temporary. When specified as temporary, the impact attenuator shall be striped according to Standard 702001 for drums. All maintenance of the temporary impact attenuators shall be the responsibility of the Contractor until removal is directed by the Engineer. When the Engineer determines the sand module impact attenuators are no longer required, the installation shall be dismantled with all sand modules and related hardware becoming the property of the Contractor.

Relocate. When the work specifies relocating the sand module impact attenuators as shown on the plans, each module shall be kept in proper orientation and position. The sand modules shall be refilled with sand when necessary.

Replacement. When the work specifies replacement of one or more individual sand module impact attenuators damaged by traffic, other than construction traffic, the following will apply. When damage to initial installation occurs, the damaged modules and the contents shall be removed completely and replaced with the required number of modules necessary to restore the installation to its original condition. The Contractor shall dispose of all damaged materials according to Article 202.03 of the Standard Specifications, and furnish and install new sand modules as directed by the Engineer. Sand modules that are not damaged, but have been laterally shifted from their original position shall be realigned and relocated to their original locations, as directed by the Engineer. Any modules damaged by the Contractor's forces shall be replaced or relocated at his/her expense.

The Contractor shall respond within 12 hours to any call from the Engineer concerning replacement of the sand module impact attenuators. If the Contractor does not respond and does not complete his/her work within 36 hours after initial call from the Engineer, then the Contractor shall be liable to the Department from the time of the initial call, in the amount of \$200/calendar day, per sand module, not as a penalty but as liquidated damages, until replacement occurs.

Method of Measurement. Contract quantities for attenuator bases may be accepted according to Article 202.07(a) of the Standard Specifications. When measured, attenuator bases will be measured in place and the dimensions used to calculate square meters (square yards) will not exceed those as shown on the plans.

Sand module impact attenuators will be measured as each for each individual module.

Basis of Payment. Attenuator bases will be paid for at the contract unit price per square meter (square yard) for ATTENUATOR BASE.

Impact attenuators will be paid for at the contract unit price each for SAND MODULE IMPACT ATTENUATOR, SAND MODULE IMPACT ATTENUATOR (TEMPORARY), SAND MODULE IMPACT ATTENUATOR (RELOCATE), or SAND MODULE IMPACT ATTENUATOR (REPLACEMENT).

SHOULDER RUMBLE STRIPS (BDE)

Effective: January 1, 2003

Delete the third paragraph of Article 482.06 of the Standard Specifications.

Delete the last two sentences of the fourth paragraph of Article 483.06 of the Standard Specifications.

Add the following to the Standard Specifications:

“SECTION 642. SHOULDER RUMBLE STRIPS

642.01 Description. This work shall consist of constructing rumble strips in shoulders.

642.02 Equipment. The equipment shall be a self-propelled milling machine with a rotary-type cutting head(s). The cutting head(s) shall be suspended from the machine such that it can align itself with the slope of the shoulder and any irregularities in the shoulder surface. The teeth of the cutting head(s) shall be arranged to provide a smooth cut, with no more than a 3 mm (1/8 in.) difference between peaks and valleys.

Prior to commencement of the work, the Contractor shall demonstrate, to the satisfaction of the Engineer, the ability of the equipment to achieve the desired results without damaging the shoulder.

CONSTRUCTION REQUIREMENTS

642.03 General. The rumble strips shall be cut to the dimensions shown on the plans. Guides shall be used to ensure consistent alignment, spacing and depth. In portland cement concrete shoulders, rumble strips may be formed according to the details shown on the plans immediately after the application of the final finish.

Rumble strips shall be omitted within the limits of structures, entrances, side roads, entrance ramps and exit ramps. In portland cement concrete shoulders, rumble strips shall not be placed within 150 mm (6 in.) of transverse joints.

Cuttings resulting from this operation shall be disposed of according to Article 202.03 of the Standard Specifications and the shoulders shall be swept clean.

642.04 Method of Measurement. This work will be measured for payment in meters (feet) along the edge of pavement. Measurement will include both the cut and uncut (formed and unformed) sections of the shoulder rumble strips with exceptions for bridge decks, approach pavements, turn lanes, entrances and other sections where shoulder rumble strips have been omitted.

642.05 Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for SHOULDER RUMBLE STRIPS.”

STABILIZED SUBBASE AND BITUMINOUS SHOULDERS SUPERPAVE (BDE)

Effective: April 1, 2002

Revised: January 1, 2003

Description. This work shall consist of constructing stabilized subbase and bituminous shoulders Superpave according to Sections 312 and 482 respectively, of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures" except as modified herein.

Revise Article 312.03(b) of the Standard Specifications to read:

"(b) RAP Material (Note 3)"

Revise Note 2 of Article 312.03 of the Standard Specifications to read:

"Note 2. Gradation CA 6, CA 10, or CA 12 shall be used."

Revise Note 3 of Article 312.03 of the Standard Specifications to read:

"Note 3. RAP shall meet the requirements of the special provision "RAP for Use in Bituminous Concrete Mixtures". RAP containing steel slag shall be permitted for use in top-lift surface mixtures only."

Revise Note 4 of Article 312.03 of the Standard Specifications to read:

"Note 4. Unless otherwise specified on the plans, the bituminous material shall be performance graded asphalt cement, PG58-22. When more than 15 percent RAP is used, a softer PG binder may be required as determined by the Engineer."

Add the following to Article 312.04 of the Standard Specifications:

- "(k) Superpave Gyratory Compactor (Note 6)
- (l) Ignition Oven (Note 7)

Note 6. The Superpave gyratory compactor (SGC) shall be used for all laboratory mixture compaction.

Note 7. The ignition oven shall be used for determination of AC content. The ignition oven shall also be used to recover aggregates for all required washed gradations. The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the calibration factor exceeds 1.5 percent other IDOT approved methods shall be utilized for determination of AC content."

Revise Article 312.06 of the Standard Specifications to read:

"312.06 Mixture Design. The Contractor shall submit mix designs for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have completed the course, "Superpave Mix Design Upgrade". The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below:

AASHTO MP 2	Standard Specification for Superpave Volumetric Mix Design
AASHTO PP 2	Standard Practice for Short and Long Term Aging of Hot Mix Asphalt (HMA)
AASHTO PP 19	Standard Practice for Volumetric Analysis of Compacted Hot Mix Asphalt (HMA)
AASHTO PP 28	Standard Practice for Designing Superpave HMA
AASHTO T 209	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
AASHTO T 312	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
AASHTO T 308	Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

(a) Job Mix Formula (JMF). The JMF shall be according to the following limits:

<u>Ingredient</u>	<u>Percent by Dry Weight</u>
Aggregate.....	94.0 to 96.0
Asphalt Cement.....	4.0 to 6.0*
Dust/AC Ratio.....	1.4

*Upper limit may be raised for the lower or top lifts if the Contractor elects to use a highly absorptive coarse and/or fine aggregate requiring more than six percent asphalt. The additional asphalt shall be furnished at no cost to the Department.

When RAP material is being used, the JMF shall be according to the following limits:

<u>Ingredient</u>	<u>Percent by Dry Weight</u>
Virgin Aggregate(s)	46.0 to 96.0
RAP Material(s) (Note 1)	0 to 50
Mineral Filler (if required).....	0 to 5.0
Asphalt Cement.....	4.0 to 7.0
Dust/AC Ratio.....	1.4

Note 1. If specified on the plans, the maximum percentage of RAP shall be as specified therein.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

(b) Volumetric Requirements.

Design Compactive Effort	Design Air Voids Target (%)
N _{DES} = 30	2.0

- (c) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified AASHTO T 283 using 4 in. Marshall bricks. To be considered acceptable by the Engineer as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSR) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSR values less than 0.75 will be considered unacceptable.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Engineer. The method of application shall be according to Article 406.12 of the Standard Specifications."

Revise Article 312.08 of the Standard Specifications to read:

"312.08 Mixture Production. When a hot-mix plant conforming to Article 1102.01 is used, the aggregate shall be dried and heated in the revolving dryer to a temperature of 120 °C (250 °F) to 175 °C (350 °F).

The aggregate and bituminous material used in the bituminous aggregate mixture shall be measured separately and accurately by weight or by volume. When the aggregate is in the mixer, the bituminous material shall be added and mixing continued for a minimum of 35 seconds and until a homogeneous mixture is produced in which all particles of the aggregate are coated. The mixing period, size of the batch and the production rate shall be approved by the Engineer.

The ingredients shall be heated and combined in such a manner as to produce a mixture which, when discharged from the mixer, shall be workable and vary not more 10 °C (20 °F) from the temperature set by the Engineer.

When RAP material(s) is used in the bituminous aggregate mixture, the virgin aggregate(s) shall be dried and heated in the dryer to a temperature that will produce the specified resultant mix temperature when combined with the RAP material.

The heated virgin aggregates and mineral filler shall be combined with RAP material in such a manner as to produce a bituminous mixture which when discharged from the mixer shall not vary more than 15 °C (30 °F) from the temperature set by the Engineer. The combined ingredients shall be mixed for a minimum of 35 seconds and until a homogeneous mixture as to composition and temperature is obtained. The total mixing time shall be a minimum of 45 seconds consisting of dry and wet mixing. Variation in wet and dry mixing times may be permitted, depending on the moisture content and amount of salvaged material used. The mix temperature shall not exceed 175 °C (350 °F). Wide variations in the mixture temperature will be cause for rejection of the mix.

- (a) Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

- (b) Required Tests. Testing for stabilized subbase and bituminous shoulders shall be conducted to control the production of the bituminous mixture at a frequency not less than that listed for Non-Class I mixtures in the special provision "QC/QA of Bituminous Concrete Mixtures".

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.6, and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resumption of production.

During production, mixture containing an anti-stripping additive will be tested by the Engineer for stripping according to Illinois Modified AASHTO T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

- (c) Control Charts/Limits. Control charts/limits shall be according to QC/QA requirements for Non-Class I Mixtures."

Replace the first paragraph of Article 312.10 of the Standard Specifications with the following:

"312.10 Placing and Compacting. After the subgrade has been compacted and is acceptable to the Engineer, the bituminous aggregate mixture shall be spread upon it with a mechanical spreader. The maximum compacted thickness of each lift shall be 150 mm (6 in.) provided the required density is obtained. The minimum compacted thickness of each lift shall be according to the following table:

Nominal Maximum Aggregate Size of Mixture	Minimum Compacted Lift Thickness
CA 12 – 12.5 mm (1/2 in.)	38 mm (1 1/2 in.)
CA 10 - 19 mm (3/4 in.)	57 mm (2 1/4 in.)
CA 6 – 25 mm (1 in.)	76 mm (3 in.)

The surface of each lift shall be clean and dry before succeeding lifts are placed."

Revise Article 482.02 of the Standard Specifications to read:

"482.02 Materials. Materials shall meet the requirements of Article 312.03. For the top lift, the aggregate used shall meet the gradation requirements for a CA 10 or CA 12. Blending of aggregates to meet these gradation requirements will be permitted."

In the first sentence of the first paragraph of Article 482.04 of the Standard Specifications change "Class I Binder and Surface Course (Type 1 or Type 2)" to "Superpave Binder and Surface Course".

Revise Article 482.04(c) of the Standard Specifications to read:

"(c) Mixture Production312.08"

Revise Article 482.05 of the Standard Specifications to read:

"482.05 Composition of Bituminous Aggregate Mixture. The composition of the mixture shall be according to Article 312.06, except that the amount of bitumen used in the top lift shall be increased up to 0.5 percent more than that required in the lower lifts. For resurfacing projects when the Superpave option is used, the bitumen used in the top lift shall not be increased. Superpave mixtures used on the top lift of such shoulders shall meet the gradation requirements of the special provision "Superpave Bituminous Concrete Mixtures".

For shoulder and strip construction, the composition of the Superpave binder and surface course shall be the same as that specified for the mainline pavement."

In the following locations of Section 482 of the Standard Specifications, change "Class I" to "Superpave":

- the second paragraph of Article 482.04
- the first sentence of the second paragraph of Article 482.06
- the first sentence of the fourth paragraph of Article 482.06
- the second sentence of the fourth paragraph of Article 482.06
- the first sentence of the third paragraph of Article 482.08(b)

Revise the first paragraph of Article 482.06 of the Standard Specifications to read:

"482.06 Placing and Compacting. This work shall be according to Article 312.10. The mechanical spreader for the top lift of shoulders shall meet the requirements of Article 1102.03 when the shoulder width is 3 m (10 ft) or greater."

Revise Article 482.09 of the Standard Specifications to read:

"482.09 Basis of Payment. When bituminous shoulders are constructed along the edges of the completed pavement structure, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS SHOULDERS SUPERPAVE of the thickness specified. The specified thickness shall be the thickness shown on the plans at the edge of the pavement.

On pavement and shoulder resurfacing projects, the shoulder resurfacing will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS SHOULDERS SUPERPAVE.

The construction of shoulder strips for resurfacing pavements will be paid according to the special provision, "Superpave Bituminous Concrete Mixtures".

80070

SUBGRADE PREPARATION (BDE)

Effective: November 1, 2002

Revise the tenth paragraph of Article 301.03 of the Standard Specifications to read:

“Equipment of such weight, or used in such a way as to cause a rut in the finished subgrade of 13 mm (1/2 in.) or more in depth, shall be removed from the work or the rutting otherwise prevented.”

80086

SUPERPAVE BITUMINOUS CONCRETE MIXTURES (BDE)

Effective: January 1, 2000

Revised: January 1, 2003

Description. This work shall consist of designing, producing and constructing Superpave bituminous concrete mixtures using Illinois Modified Strategic Highway Research Program (SHRP) Superpave criteria. This work shall be according to Sections 406 and 407 of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures", except as follows.

Materials.

- (a) Fine Aggregate Blend Requirement. The Contractor may be required to provide FA 20 manufactured sand to meet the design requirements. For mixtures with $N_{design} \geq 90$, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation.
- (b) Reclaimed Asphalt Pavement (RAP). If the Contractor is allowed to use more than 15 percent RAP, as specified in the plans, a softer performance-graded binder may be required as determined by the Engineer.

RAP shall meet the requirements of the special provision, "RAP for Use in Bituminous Concrete Mixtures".

RAP will not be permitted in mixtures containing polymer modifiers.

RAP containing steel slag will be permitted for use in top-lift surface mixtures only.

- (c) Bituminous Material. The asphalt cement (AC) shall be performance-graded (PG) or polymer modified performance-graded (SBS-PG or SBR-PG) meeting the requirements of Article 1009.05 of the Standard Specifications for the grade specified on the plans.

The following additional guidelines shall be used if a polymer modified asphalt is specified:

- (1) The polymer modified asphalt cement shall be shipped, maintained, and stored at the mix plant according to the manufacturer's requirements. Polymer modified asphalt cement shall be placed in an empty tank and shall not be blended with other asphalt cements.

- (2) The mixture shall be designed using a mixing temperature of $163 \pm 3^{\circ}\text{C}$ ($325 \pm 5^{\circ}\text{F}$) and a gyratory compaction temperature of $152 \pm 3^{\circ}\text{C}$ ($305 \pm 5^{\circ}\text{F}$).
- (3) Pneumatic-tired rollers will not be allowed unless otherwise specified by the Engineer. A vibratory roller meeting the requirements of Article 406.16 of the Standard Specifications shall be required in the absence of the pneumatic-tired roller.
- (4) A manufacturer's representative from the polymer asphalt cement producer shall be present during each polymer mixture start-up and shall be available at all times during production and lay-down of the mix.

Laboratory Equipment.

- (a) Superpave Gyratory Compactor. The superpave gyratory compactor (SGC) shall be used for all QC/QA testing.
- (b) Ignition Oven. The ignition oven shall be used to determine the AC content. The ignition oven shall also be used to recover aggregates for all required washed gradations.

The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the AC content.

Mixture Design. The Contractor shall submit mix designs, for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have successfully completed the course, "Superpave Mix Design Upgrade". Articles 406.10 and 406.13 of the Standard Specifications shall not apply. The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below.

AASHTO MP 2	Standard Specification for Superpave Volumetric Mix Design
AASHTO PP 2	Standard Practice for Short and Long Term Aging of Hot Mix Asphalt (HMA)
AASHTO PP 19	Standard Practice for Volumetric Analysis of Compacted Hot Mix Asphalt (HMA)
AASHTO PP 28	Standard Practice for Designing Superpave HMA
AASHTO T 209	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
AASHTO T 312	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
AASHTO T 308	Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

- (a) Mixture Composition. The ingredients of the bituminous mixture shall be combined in such proportions as to produce a mixture conforming to the composition limits by weight.

The gradation mixture specified on the plans shall produce a mixture falling within the limits specified in Table 1.

TABLE 1. MIXTURE COMPOSITION (% PASSING)^{1/}								
Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm^{4/}		IL-9.5 mm^{4/}	
	min	max	min	max	min	max	min	max
37.5 mm (1 1/2 in.)		100						
25 mm (1 in.)	90	100		100				
19 mm (3/4 in.)		90	82	100		100		
12.5 mm (1/2 in.)	45	75	50	85	90	100		100
9.5 mm (3/8 in.)						90	90	100
4.75 mm (#4)	24	42 ^{2/}	24	50 ^{2/}	24	65	24	65
2.36 mm (#8)	16	31	16	36	16	48 ^{3/}	16	48 ^{3/}
1.18 mm (#16)	10	22	10	25	10	32	10	32
600 µm (#30)								
300 µm (#50)	4	12	4	12	4	15	4	15
150 µm (#100)	3	9	3	9	3	10	3	10
75 µm (#200)	3	6	3	6	4	6	4	6

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 40 percent passing the 4.75 mm (#4) sieve for binder courses with Ndesign ≥ 90.
- 3/ The mixture composition shall not exceed 40 percent passing the 2.36 mm (#8) sieve for surface courses with Ndesign ≥ 90.
- 4/ The mixture composition for surface courses shall be according to IL-12.5 mm or IL-9.5 mm, unless otherwise specified by the Engineer.

One of the above gradations shall be used for leveling binder as specified in the plans and according to Article 406.04 of the Standard Specifications.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

- (b) Dust/AC Ratio for Superpave. The ratio of material passing the 75 μm (#200) sieve to total asphalt cement shall not exceed 1.0 for mixture design (based on total weight of mixture).
- (c) Volumetric Requirements. The target value for the air voids of the hot mix asphalt (HMA) shall be 4.0 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the requirements listed in Table 2.

TABLE 2. VOLUMETRIC REQUIREMENTS					
	Voids in the Mineral Aggregate (VMA), % minimum				Voids Filled with Asphalt (VFA), %
Ndesign	IL-25.0	IL-19.0	IL-12.5	IL-9.5	
50	12.0	13.0	14.0	15	65 - 78
70					65 - 75
90					
105					

- (d) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified T 283 using 4 in. Marshall bricks. To be considered acceptable by the Department as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSRs) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSRs less than 0.75 will be considered unacceptable.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Department. The method of application shall be according to Article 406.12 of the Standard Specifications.

Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

Required Plant Tests. Testing shall be conducted to control the production of the bituminous mixture. The Contractor shall use the test methods identified to perform the following mixture tests at a frequency not less than that indicated in Table 3.

TABLE 3. REQUIRED PLANT TESTS for SUPERPAVE		
Parameter		Frequency of Tests
Asphalt Content by Ignition Oven		1 per half day of production
Air Voids	Bulk Specific Gravity of Gyratory Sample	1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)
	Maximum Specific Gravity of Mixture	
		Illinois Modified AASHTO T 308
		Illinois Modified AASHTO T 312
		Illinois Modified AASHTO T 209

During production, the ratio of minus 75 μm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.2 and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 μm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resuming production.

During production, mixtures containing an anti-stripping additive will be tested by the Department for stripping according to Illinois Modified T 283. If the mixture fails to meet the TSR criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

Construction Requirements

Lift Thickness.

- (a) Binder and Surface Courses. The minimum compacted lift thickness for constructing bituminous concrete binder and surface courses shall be according to Table 4:

TABLE 4 – MINIMUM COMPACTED LIFT THICKNESS	
Mixture	Thickness, mm (in.)
IL-9.5	32 (1 1/4)
IL-12.5	38 (1 1/2)
IL-19.0	57 (2 1/4)
IL-25.0	76 (3)

- (b) Leveling Binder. Mixtures used for leveling binder shall be as follows:

TABLE 5 – LEVELING BINDER	
Nominal, Compacted, Leveling Binder Thickness, mm (in.)	Mixture
≤ 32 (1 1/4)	IL-9.5
32 (1 1/4) to 50 (2)	IL 9.5 or IL-12.5

Density requirements shall apply for leveling binder when the nominal, compacted thickness is 32 mm (1 1/4 in.) or greater for IL-9.5 mixtures and 38 mm (1 1/2 in.) or greater for IL-12.5 mixtures.

- (c) Full-Depth Pavement. The compacted thickness of the initial lift of binder course shall be 100 mm (4 in.). The compacted thickness of succeeding lifts shall meet the minimums specified in Table 4 but not exceed 100 mm (4 in.).

If a vibratory roller is used for breakdown, the compacted thickness of the binder lifts, excluding the top lift, may be increased to 150 mm (6 in.) provided the required density is obtained.

- (d) Bituminous Patching. The minimum compacted lift thickness for constructing bituminous patches shall be according to Table 4.

Control Charts/Limits. Control charts/limits shall be according to QC/QA Class I requirements, except density shall be plotted on the control charts within the following control limits:

TABLE 6. DENSITY CONTROL LIMITS	
Parameter	Individual Test
Ndesign \geq 90	92.0 - 96.0%
Ndesign < 90	93 - 97%

Basis of Payment. On resurfacing projects, this work will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On resurfacing projects in which polymer modifiers are required, this work will be paid for at the contract unit price per metric ton (ton) for POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, POLYMERIZED LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and POLYMERIZED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On full-depth pavement projects, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE PAVEMENT, (FULL-DEPTH), SUPERPAVE, of the thickness specified.

80010

SURFACE TESTING OF INTERSTATE PAVEMENTS (BDE)

Effective: April 1, 2002

Bituminous Concrete Overlays

Revise Article 406.03(k) of the Standard Specifications to read:

“(k) Pavement Surface Test Equipment1101.10”

Revise Article 406.21 of the Standard Specifications to read:

“406.21 Surface Tests. The finished surface of the pavement shall be tested for smoothness within 24 hours and before the pavement is opened to traffic. All objects and debris shall be removed from the pavement surface prior to testing. Testing shall be performed in the presence of the Engineer.

(a) Test Sections/Equipment.

- (1) High-Speed Mainline Pavement. High-speed mainline pavement shall consist of pavements, ramps and loops with a posted speed greater than 75 km/hr (45 mph). These sections shall be tested using a California Profilograph or an approved equivalent.
- (2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps and loops with a posted speed of 75 km/hr (45 mph) or less. These sections shall be tested using a California Profilograph or an approved equivalent.
- (3) Miscellaneous Pavement. Miscellaneous pavement shall consist of:
 - a. pavement on horizontal curves with a centerline radius of curvature of less than or equal to 300 m (1000 ft) and pavement within the superelevation transition of such curves;
 - b. the first or last 4.5 m (15 ft) of a pavement section where the Contractor is not responsible for the adjoining surface;
 - c. intersections;
 - d. variable width pavements;
 - e. side street returns;
 - f. crossovers;
 - g. connector pavement from mainline pavement expansion joint to the bridge approach pavement;
 - h. bridge approach pavement; and
 - i. other miscellaneous pavement surfaces (i.e. a turn lane) as determined by the Engineer.

Miscellaneous pavement shall be tested using a 5 m (16 ft) straightedge set to a 10 mm (3/8 in.) tolerance.

(b) Lots/Sublots. Mainline pavement test sections will be divided into lots and sublots.

(1) Lots. A lot will be defined as a continuous strip of pavement 1600 m (1 mile) long and one lane wide. When the length of a continuous strip of pavement is less than 1600 m (1 mile), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length.

(2) Sublots. Lots will be divided into 160 m (0.1 mile) sublots. A partial subplot resulting from an interruption in the pavement will be subject to the same evaluation as a whole subplot.

(c) Testing Procedure. One wheel track shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to the edge of the lane away from traffic. A guide shall be used to maintain the proper distance.

The profile trace generated shall have stationing indicated every 150 m (500 ft) at a minimum. Both ends of the profile trace shall be labeled with the following information: contract number, beginning and ending stationing, which direction is up on the trace, which direction the profilograph was pushed, and the profilograph operator name(s). The top portion of the Department supplied form, "Profilograph Report of Pavement Smoothness" shall be completed and secured around the trace roll.

Although surface testing of intermediate lifts will not be required, they may be performed at the Contractor's option. When this option is chosen, the testing shall be performed and the profile traces shall be generated as described above.

The Engineer may perform his/her own testing at any time for monitoring and comparison purposes.

(d) Trace Reduction and Bump Locating Procedure. All traces shall be reduced. Traces produced by a mechanical recorder shall be reduced using an electronic scanner and computer software. This software shall calculate the profile index of each subplot in mm/km (in./mile) and indicate any high points (bumps) in excess of 8 mm (0.30 in.) with a line intersecting the profile on the printout. Computerized recorders shall provide the same information.

The profile index of each track, average profile index of each subplot, average profile index of the lot and locations of bumps shall be recorded on the form.

All traces and reports shall be provided to the Engineer for the project file.

The Engineer will use the results of the testing to evaluate paving methods and equipment. If the average profile index of a lot exceeds 635 mm/km (40.0 in./mile) for high-speed mainline pavement or 1025 mm/km (65.0 in./mile) for low-speed mainline pavement, the paving operation will be suspended until corrective action is taken by the Contractor.

(e) Corrective Work. All bumps in excess of 8 mm (0.30 in.) in a length of 8 m (25 ft) or less shall be corrected. If the bump is greater than 13 mm (0.50 in.), the pavement shall be removed and replaced to the satisfaction of the Engineer at the Contractor's expense. The minimum length of pavement to be removed shall be 900 mm (3 ft).

(1) High-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 475 (30.0) to 635 (40.0) mm/km (in./mile) including bumps, shall be corrected to reduce the profile index to 475 mm/km (30.0 in./mile) or less on each trace. Any subplot having a profile index greater than 635 mm/km (40.0 in./mile) including bumps, shall be corrected to reduce the profile index to 475 mm/km (30.0 in./mile) or less on each trace, or replaced at the Contractor's option.

(2) Low-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 710 (45.0) to 1025 (65.0) mm/km (in./mile) including bumps, shall be corrected to reduce the profile index to 710 mm/km (45.0 in./mile) or less on each trace. Any subplot having a profile index greater than 1025 mm/km (65.0 in./mile) including bumps, shall be corrected to reduce the profile index to 710 mm/km (45.0 in./mile) or less on each trace, or replaced at the Contractor's option.

(3) Miscellaneous Pavement. Surface variations which exceed the 10 mm (3/8 in.) tolerance will be marked by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed using either an approved grinding device consisting of multiple saws or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area squared normal to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the subplot(s) shall be retested. The Contractor shall furnish the profilograph tracing(s) and the completed form(s) to the Engineer within two working days after corrections are made. If the profile index and/or bumps still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at the Contractor's expense.

(f) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each subplot of mainline pavement, per the Smoothness Assessment Schedule. Assessments will be based on the average profile index of each subplot prior to performing any corrective work unless the Contractor has chosen to remove and replace the subplot. For sublots that are replaced, assessments will be based on the profile index determined after replacement.

Assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.

SMOOTHNESS ASSESSMENT SCHEDULE (Bituminous Concrete Overlays)		
High-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Assessment per subplot
95 (6.0) or less		+\$300.00
>95 (6.0) to 160 (10.0)	240 (15.0) or less	+\$250.00
>160 (10.0) to 240 (15.0)		+\$200.00
	>240 (15.0) to 400 (25.0)	+\$150.00
>240 (15.0) to 285 (18.0)		+\$100.00
>285 (18.0) to 475 (30.0)	>400 (25.0) to 710 (45.0)	+\$0.00
>475 (30.0) to 635 (40.0)	>710 (45.0) to 1025 (65.0)	+\$0.00
Greater than 635 (40.0)	Greater than 1025 (65.0)	-\$300.00

Smoothness assessments will not be applied to miscellaneous pavement sections.”

Bituminous Concrete Pavement (Full-Depth)

Revise Article 407.09 of the Standard Specifications to read:

“407.09 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.21 except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to each lane edge.”

SMOOTHNESS ASSESSMENT SCHEDULE (Full-Depth Bituminous)		
High-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Assessment per subplot
95 (6.0) or less		+\$800.00
>95 (6.0) to 160 (10.0)	240 (15.0) or less	+\$650.00
>160 (10.0) to 240 (15.0)		+\$500.00
	>240 (15.0) to 400 (25.0)	+\$350.00
>240 (15.0) to 285 (18.0)		+\$250.00
>285 (18.0) to 475 (30.0)	>400 (25.0) to 710 (45.0)	+\$0.00
>475 (30.0) to 635 (40.0)	>710 (45.0) to 1025 (65.0)	+\$0.00
Greater than 635 (40.0)	Greater than 1025 (65.0)	-\$500.00

Delete the fourth paragraph of Article 407.13 of the Standard Specifications.

Portland Cement Concrete Pavement

Revise Article 420.12 of the Standard Specifications to read:

“420.12 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.21 except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 1 m (3 ft) from and parallel to each lane edge.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at the Contractor's expense.

No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.21 at the Contractor's expense.”

For pavement that is corrected by removal and replacement, the minimum length to be removed shall meet the requirements of either Class A or Class B patching.

SMOOTHNESS ASSESSMENT SCHEDULE (PCC)		
High-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Low-Speed Mainline Pavement Average Profile Index mm/km (in./mile)	Assessment per subplot
95 (6.0) or less		+\$1200.00
>95 (6.0) to 160 (10.0)	240 (15.0) or less	+\$1000.00
>160 (10.0) to 240 (15.0)		+\$750.00
	>240 (15.0) to 400 (25.0)	+\$500.00
>240 (15.0) to 285 (18.0)		+\$370.00
>285 (18.0) to 475 (30.0)	>400 (25.0) to 710 (45.0)	+\$0.00
>475 (30.0) to 635 (40.0)	>710 (45.0) to 1025 (65.0)	+\$0.00
Greater than 635 (40.0)	Greater than 1025 (65.0)	-\$750.00

Delete the sixth paragraph of Article 420.23 of the Standard Specifications.

Testing Equipment

Revise Article 1101.10 of the Standard Specifications to read:

“1101.10 Pavement Surface Test Equipment. Required surface testing and analysis equipment and their jobsite transportation shall be provided by the Contractor.

- (a) 5 m (16 ft) Straightedge. The 5 m (16 ft) straightedge shall consist of a metal I-beam mounted between two wheels spaced 5 m (16 ft) between the axles. Scratcher bolts which can be easily and accurately adjusted, shall be set at the 1/4, 1/2, and 3/4 points between the axles. A handle suitable for pushing and guiding shall be attached to the straightedge. The straightedge shall meet the approval of the Engineer.

(b) California Profilograph. The California Profilograph or approved equivalent shall consist of a frame 8 m (25 ft) in length supported upon multiple wheels at either end. The profile shall be recorded from the vertical movement of a wheel attached to the frame at mid point. All traces from pavement sections tested with a California Profilograph or approved equivalent shall be recorded on paper with scales of 300:1 longitudinally and 1:1 vertically.

(1) Calibration. The Contractor shall demonstrate to the Engineer that the testing equipment has proper tire pressure inflation, trueness of tire travel, and is calibrated for vertical displacement and horizontal distance. This calibration shall consist of the following:

- a. A 150 to 300 m (500 to 1000 ft) long calibration test section shall be located on the project. This test section should be relatively straight and flat. The profilograph shall be calibrated for longitudinal distance on this test section to the satisfaction of the Engineer.
- b. Longitudinal calibration consists of pushing, at walking speed (approximately 5 km/hr (3 mph)), the profilograph over the pre-measured test section and determining the chart scale factor. To calculate the chart scale factor, divide the pre-measured test distance, in millimeters (inches), by the length of the profile trace from this test section, in millimeters (inches). This factor should be 300 ± 0.5 . If the profilograph produces charts with a different scale factor, adjustment of the profilograph shall be made to bring the scale factor to the tolerance specified above.
- c. Vertical calibration consists of placing the center recording wheel of the profilograph on a base plate and recording the base elevation. Two plates, 13 mm (0.5 in.) thick each, are added under the center wheel, one at a time, and the change in elevation noted. The two plates are removed, one at a time, and the change in elevation noted. Each step in the process shall show a change in height of $13 \text{ mm} \pm 1.0 \text{ mm}$ ($0.5 \pm 0.01 \text{ in.}$). If the profilograph produces results not conforming to the above limits, it shall be adjusted to the tolerance specified.
- d. The automatic trace reduction capability of a machine so equipped shall be checked by comparing the machine's results to the results obtained through manual trace reduction using California Test Method 526-D with a 0.0 mm (0.00 in.) blanking band. The comparison shall be made with the trace obtained on the pre-measured test section. The results of the comparison shall not differ by more than 30 mm/km (2.0 in./mile).
- e. All calibration traces and calculations shall be submitted to the Engineer for the project file.

The Engineer may retest the pavement at any time to verify the accuracy of the equipment.

(2) Trace Analysis. The Contractor shall reduce/evaluate these traces using a 0.0 mm (0.00 in.) blanking band and determine a profile index in mm/km (in./mile) for each section of finished pavement surface. If the Contractor's profilograph is equipped

with a computerized recorder, the trace produced will be evaluated without further reduction. If the profilograph has a mechanical recorder, the Contractor shall provide an electronic scanner, a computer, and software to reduce the trace. All analysis equipment (electronic scanner, computerized recorder, etc.) shall be able to accept 0.0 mm (0.00 in.) for the blanking band.”

80075

TEMPORARY CONCRETE BARRIER (BDE)

Effective: October 1, 2002

Revised: January 1, 2003

Revise Section 704 of the Standard Specifications to read:

“SECTION 704. TEMPORARY CONCRETE BARRIER

704.01 Description. This work shall consist of furnishing, placing, maintaining, relocating and removing precast concrete barrier at temporary locations as shown on the plans or as directed by the Engineer.

704.02 Materials. Materials shall meet the requirements of the following Articles of Section 1000 - Materials:

Item	Article/Section
(a) Portland Cement Concrete	1020
(b) Reinforcement Bars (Note 1)	1006.10(a)(b)
(c) Connecting Pins and Anchoring Pins	1006.09
(d) Connecting Loop Bars (Note 2)	
(e) Rapid Set Mortar (Note 3)	

Note 1. Reinforcement bars shall be Grade 400 (Grade 60).

Note 2. Connecting loop bars shall be smooth bars conforming to the requirements of ASTM A 36.

Note 3. Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs. For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume or a packaged rapid set mortar shall be used. Mixing of the rapid set mortar shall be according to the manufacturer's instructions.

CONSTRUCTION REQUIREMENTS

704.03 General. Precast concrete barrier produced after October 1, 2002 shall meet National Cooperative Highway Research Program (NCHRP) Report 350, Category 3, Test Level 3 requirements and have the F shape. Precast concrete barrier shall be constructed according to the Bureau of Materials and Physical Research's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products", applicable portions of Sections 504 and 1020, and to the details shown on the plans.

Precast units shall not be removed from the casting beds until a flexural strength of 2,000 kPa (300 psi) or a compressive strength of 10,000 kPa (1400 psi) is attained. Precast units shall not be transported to the jobsite until a minimum flexural strength of 4,500 kPa (650 psi) or a minimum compressive strength of 24,000 kPa (3500 psi) is attained. In no case shall precast units be loaded, shipped and used prior to four days after casting.

704.04 Installation. F shape barrier units shall be seated on bare, clean pavement or paved shoulder and pinned together in a smooth, continuous line at the exact locations provided by the Engineer. The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six anchoring pins and protected with an accepted NCHRP 350, Test Level 3, crashworthy device as shown on the plans.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

704.05 New Jersey Shape Barrier. New Jersey shape barrier produced prior to October 1, 2002 according to earlier Department standards, may be used until January 1, 2008.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six dowel bars and protected with an accepted NCHRP 350, Test Level 3, crashworthy device as shown on the plans.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

704.06 Method of Measurement. Temporary concrete barrier will be measured for payment in meters (feet) in place along the centerline of the barrier. When temporary concrete barrier is relocated within the limits of the jobsite, the relocated barrier will be measured for payment in meters (feet) in place along the centerline of the barrier.

704.07 Basis of Payment. When the Contractor furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER or RELOCATE TEMPORARY CONCRETE BARRIER.

When the Department furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER, STATE OWNED or RELOCATE TEMPORARY CONCRETE BARRIER, STATE OWNED.

The NCHRP 350 crashworthy device will be paid for separately.”

80092

TEMPORARY EROSION CONTROL (BDE)

Effective: November 1, 2002

Revise the fifth sentence of the third paragraph of Article 280.04(a) of the Standard Specifications to read:

“This work may be constructed of hay or straw bales, extruded UV resistant high density polyethylene panels, erosion control blanket, mulch barrier, aggregate barriers, excavation, seeding, or mulch used separately or in combination, as approved, by the Engineer.”

Add the following paragraphs after the fifth paragraph of Article 280.04(a) of the Standard Specifications.

“A ditch check constructed of extruded, UV resistant, high density polyethylene panels, “M” pins and erosion control blanket shall consist of the following materials:

Extruded, UV resistant, high density polyethylene panels shall have a minimum height of 250 mm (10 in.) and minimum length of 1.0 m (39.4 in.). The panels shall have a 51 mm (2 in.) lip along the bottom of the panel. Each panel shall have a single rib thickness of 4 mm (5/32 in.) with a 12 mm (1/2 in.) distance between the ribs. The panels shall have an average apparent opening size equal to 4.75 mm (No. 4) sieve, with an average of 30 percent open area. The tensile strength of each panel shall be 26.27 kN/m (1800 lb/ft) in the machine direction and 7.3 kN/m (500 lb/ft) in the transverse direction when tested according to ASTM D 4595.

“M” pins shall be at least 76 mm (3 in.) by 686 mm (27 in.), constructed out of deformed grade C1008 D3.5 rod (0.211 in. diameter). The rod shall have a minimum tensile strength of 55 MPa (8000 psi).

Erosion control blanket shall conform to Article 251.04.

A section of erosion control blanket shall be placed transverse to the flowline direction of the ditch prior to the construction of the polyethylene ditch check. The length of the section shall extend from the top of one side of the ditch to the top of the opposite side of the ditch, while the width of the section shall be one roll width of the blanket. The upstream edge of the erosion control blanket shall be secured in a 100 mm (4 in.) trench. The blanket shall be secured in the trench with 200 mm (8 in.) staples placed at 300 mm (1 ft) intervals along the edge before the trench is backfilled. Once the upstream edge of the blanket is secured, the downstream edge shall be secured with

200 mm (8 in.) staples placed at 300 mm (1 ft) intervals along the edge. The polyethylene ditch check shall be installed in the middle of the erosion control blanket, with the lip of each panel facing outward.

The ditch check shall consist of two panels placed back to back forming a single row. Placement of the first two panels shall be at the toe of the backslope or sideslope, with the panels extending across the bottom of the ditch. Subsequent panels shall extend both across the bottom of the ditch and up the opposite sideslope, as well as up the original backslope or sideslope at the distance determined by the Engineer.

The M pins shall be driven through the panel lips to secure the panels to the ground. M pins shall be installed in the center of the panels with adjacent panels overlapping the ends a minimum of 50 mm (2 in.). The pins shall be placed through both sets of panels at each overlap. They shall be installed at an interval of three M pins per one meter (39 in.) length of ditch check. The panels shall be wedged into the M pins at the top to ensure firm contact between the entire bottom of the panels and the soil."

80087

TRAFFIC BARRIER TERMINALS (BDE)

Effective: January 1, 2003

Revise Article 631.05 of the Standard Specifications to read:

"631.05 Traffic Barrier Terminal, Type 5 and Type 5A. The face of the guardrail shall be installed flush with the face of the bridge rail or parapet."

Revise Article 631.06 of the Standard Specifications to read:

"631.06 Traffic Barrier Terminal, Type 6. When attaching the end shoe to concrete constructed with forms and with a thickness of 300 mm (12 in.) or less, the holes may be formed, core drilled or an approved 20 mm (3/4 in.) cast-in-place insert may be used.

When attaching the end shoe to concrete constructed with forms and with a thickness greater than 300 mm (12 in.), an approved M20 (3/4 in.) bolt with an approved expansion device may be used in lieu of formed or core drilled holes.

When attaching the end shoe to concrete constructed by slipforming, the holes shall be core drilled.

The tapered, parapet, wood block out shall be used on all appurtenances with a sloped face.

When no bridge approach curb is present, Type B concrete curb shall be constructed as shown on the plans according to Section 606."

Revise Article 631.07 of the Standard Specifications to read:

"631.07 Traffic Barrier Terminal, Type 6B. Attachment of the end shoe to concrete shall be according to Article 631.06 except the tapered, parapet, wood block out will not be required."

Delete the third and fourth paragraphs of Article 631.11 of the Standard Specifications.

Add the following paragraph to the end of Article 631.11 of the Standard Specifications:

“Construction of the Type B concrete curb for TRAFFIC BARRIER TERMINAL, TYPE 6 will be paid for according to Article 606.14.”

80098

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: April 1, 1992

Revised: January 1, 2003

To ensure a prompt response to incidents involving the integrity of work zone traffic control, the Contractor shall provide a telephone number where a responsible individual can be contacted 24 hours-a-day.

When the Engineer is notified, or determines a traffic control deficiency exists, he/she will notify and direct the Contractor to correct the deficiency within a specified time. The specified time, which begins upon notification to the Contractor, will be from 1/2 hour to 12 hours based upon the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge.

The deficiency may be any lack of repair, maintenance or non-compliance with the traffic control plan.

If the Contractor fails to correct the deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The calendar day(s) will begin with notification to the Contractor and end with the Engineer's acceptance of the correction. The daily monetary deduction will be either \$1,000 or 0.05 percent of the awarded contract value, whichever is greater.

In addition, if the Contractor fails to respond, the Engineer may correct the deficiency and the cost thereof will be deducted from monies due or which may become due the Contractor. This corrective action will in no way relieve the Contractor of his/her contractual requirements or responsibilities.

5729I

UNDERDRAIN OPERATIONS (BDE)

Effective: November 1, 2002

Underdrain operations shall be completed prior to weekend periods. Should delays of any type or for any reason prevent the completion of the work, the underdrain trenches shall be temporarily backfilled. Material able to support the average daily traffic and meeting the

approval of the Engineer shall be used for the temporary backfill. The cost of furnishing, placing, maintaining, removing and disposing of the temporary work, including traffic control, shall be the responsibility of the Contractor.

80091

VERTICAL BARRICADES (BDE)

Effective: November 1, 2002

Revised: January 1, 2003

Add the following to Article 702.03 of the Standard Specifications:

“(h) Vertical Barricades. Vertical Barricades shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 and the special provision “Work Zone Traffic Control Devices”. Vertical barricades may be used in lieu of cones, drums or Type I and Type II barricades to channelize traffic. Vertical barricades shall not be used in lane closure tapers.”

80089

WEIGHT CONTROL DEFICIENCY DEDUCTION

Effective: April 1, 2001

Revised: August 1, 2002

The Contractor shall provide accurate weights of materials delivered to the contract for incorporation into the work (whether temporary or permanent) and for which the basis of payment is by weight. These weights shall be documented on delivery tickets which shall identify the source of the material, type of material, the date and time the material was loaded, the contract number, the net weight, the tare weight when applicable and the identification of the transporting vehicle. For aggregates, the Contractor shall have the driver of the vehicle furnish or establish an acceptable alternative to provide the contract number and a copy of the material order to the source for each load. The source is defined as that facility that produces the final material product that is to be incorporated into the contract pay items.

The Department will conduct random, independent vehicle weight checks for material sources according to the procedures outlined in the Documentation Section Policy Statement of the Department's Construction Manual and hereby incorporated by reference. The results of the independent weight checks shall be applicable to all contracts containing this Special Provision. Should the vehicle weight check for a source result in the net weight of material on the vehicle exceeding the net weight of material shown on the delivery ticket by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. No adjustment in pay quantity will be made. Should the vehicle weight check for a source result in the net weight of material shown on the delivery ticket exceeding the net weight of material on the vehicle by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. The Engineer will adjust the net weight shown on the delivery ticket to the checked delivered net weight as determined by the independent vehicle weight check.

The Engineer will also adjust the method of measurement for all contracts for subsequent deliveries of all materials from the source based on the independent weight check. The net weight of all materials delivered to all contracts containing this Special Provision from this source, for which the basis of payment is by weight, will be adjusted by applying a correction factor "A" as determined by the following formula:

$$A = 1.0 - \left(\frac{B - C}{B} \right); \text{ Where } A \leq 1.0; \left(\frac{B - C}{C} \right) > 0.50\% \text{ (0.70\% for aggregates)}$$

Where A = Adjustment factor
B = Net weight shown on delivery ticket
C = Net weight determined from independent weight check

The adjustment factor will be applied as follows:

$$\text{Adjusted Net Weight} = A \times \text{Delivery Ticket Net Weight}$$

The adjustment factor will be imposed until the cause of the deficient weight is identified and corrected by the Contractor to the satisfaction of the Engineer. If the cause of the deficient weight is not identified and corrected within seven (7) calendar days, the source shall cease delivery of all materials to all contracts containing this Special Provision for which the basis of payment is by weight.

Should the Contractor elect to challenge the results of the independent weight check, the Engineer will continue to document the weight of material for which the adjustment factor would be applied. However, provided the Contractor furnishes the Engineer with written documentation that the source scale has been calibrated within seven (7) calendar days after the date of the independent weight check, adjustments in the weight of material paid for will not be applied unless the scale calibration demonstrates that the source scale was not within the specified Department of Agriculture tolerance.

At the Contractor's option, the vehicle may be weighed on a second independent Department of Agriculture certified scale to verify the accuracy of the scale used for the independent weight check.

80048

WEIGHT CONTROL DEFICIENCY DEDUCTION

Effective: April 1, 2001

Revised: August 1, 2002

The Contractor shall provide accurate weights of materials delivered to the contract for incorporation into the work (whether temporary or permanent) and for which the basis of payment is by weight. These weights shall be documented on delivery tickets which shall identify the source of the material, type of material, the date and time the material was loaded, the contract number, the net weight, the tare weight when applicable and the identification of the transporting vehicle. For aggregates, the Contractor shall have the driver of the vehicle furnish

or establish an acceptable alternative to provide the contract number and a copy of the material order to the source for each load. The source is defined as that facility that produces the final material product that is to be incorporated into the contract pay items.

The Department will conduct random, independent vehicle weight checks for material sources according to the procedures outlined in the Documentation Section Policy Statement of the Department's Construction Manual and hereby incorporated by reference. The results of the independent weight checks shall be applicable to all contracts containing this Special Provision. Should the vehicle weight check for a source result in the net weight of material on the vehicle exceeding the net weight of material shown on the delivery ticket by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. No adjustment in pay quantity will be made. Should the vehicle weight check for a source result in the net weight of material shown on the delivery ticket exceeding the net weight of material on the vehicle by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. The Engineer will adjust the net weight shown on the delivery ticket to the checked delivered net weight as determined by the independent vehicle weight check.

The Engineer will also adjust the method of measurement for all contracts for subsequent deliveries of all materials from the source based on the independent weight check. The net weight of all materials delivered to all contracts containing this Special Provision from this source, for which the basis of payment is by weight, will be adjusted by applying a correction factor "A" as determined by the following formula:

$$A = 1.0 - \left(\frac{B - C}{B} \right); \text{ Where } A \leq 1.0; \left(\frac{B - C}{C} \right) > 0.50\% \text{ (0.70\% for aggregates)}$$

Where A = Adjustment factor
B = Net weight shown on delivery ticket
C = Net weight determined from independent weight check

The adjustment factor will be applied as follows:

$$\text{Adjusted Net Weight} = A \times \text{Delivery Ticket Net Weight}$$

The adjustment factor will be imposed until the cause of the deficient weight is identified and corrected by the Contractor to the satisfaction of the Engineer. If the cause of the deficient weight is not identified and corrected within seven (7) calendar days, the source shall cease delivery of all materials to all contracts containing this Special Provision for which the basis of payment is by weight.

Should the Contractor elect to challenge the results of the independent weight check, the Engineer will continue to document the weight of material for which the adjustment factor would be applied. However, provided the Contractor furnishes the Engineer with written documentation that the source scale has been calibrated within seven (7) calendar days after the date of the independent weight check, adjustments in the weight of material paid for will not be applied unless the scale calibration demonstrates that the source scale was not within the specified Department of Agriculture tolerance.

At the Contractor's option, the vehicle may be weighed on a second independent Department of Agriculture certified scale to verify the accuracy of the scale used for the independent weight check.

80048

WORK ZONE PUBLIC INFORMATION SIGNS (BDE)

Effective: September 1, 2002

Description. This work shall consist of the erection, maintenance and removal of "PLEASE SLOW DOWN, MY MOMMY WORKS HERE" signs and/or "PLEASE SLOW DOWN, MY DADDY WORKS HERE" signs. The signs shall be erected in matching pairs on each side of each approach to the work zone, midway between the first and second advance warning signs according to Article 702.05(a) of the Standard Specifications and Highway Standard 702001.

The 1200 mm x 1500 mm (48 in. x 60 in.) sign panels will be furnished by the Department. Upon completion of the project, the sign panels shall be removed and returned to the Department.

Method of Measurement. Each sign will be measured as one each.

Basis of Payment. This work will be paid for at the contract unit price per each for WORK ZONE PUBLIC INFORMATION SIGNS.

80090

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: January 1, 2003

Add the following to Article 702.01 of the Standard Specifications:

"All devices and combinations of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 for their respective categories. The categories are as follows:

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, flexible delineators and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self-certified by the manufacturer.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions, truck mounted attenuators and other devices not meeting the definitions of Category 1 or 2. Category 3 devices shall be crash tested and accepted for Test Level 3.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals and area lighting supports. Currently, there is no implementation date set for this category and it is exempt from the NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer's self-certification letter for each Category 1 device and an FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets the NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device."

Delete the third, fourth and fifth paragraphs of Article 702.03(b) of the Standard Specifications.

Delete the third sentence of the first paragraph of Article 702.03(c) of the Standard Specifications.

Delete the fourth paragraph of Article 702.05(a) of the Standard Specifications.

Revise the sixth paragraph of Article 702.05(a) of the Standard Specifications to read:

"When the work operations exceed four days, all signs shall be post mounted unless the signs are located on the pavement or define a moving or intermittent operation. When approved by the Engineer, a temporary sign stand may be used to support a sign at 1.2 m (5 ft) where posts are impractical. Longitudinal dimensions shown on the plans for the placement of signs may be increased up to 30 m (100 ft) to avoid obstacles, hazards or to improve sight distance, when approved by the Engineer. "ROAD CONSTRUCTION AHEAD" signs will also be required on side roads located within the limits of the mainline "ROAD CONSTRUCTION AHEAD" signs."

Delete all references to "Type 1A barricades" and "wing barricades" throughout Section 702 of the Standard Specifications.

80097

FORMED CONCRETE REPAIR

Effective: October 10, 1995

Revised: August 21, 2002

This work consists of removing and disposing of all deteriorated concrete and replacing it with new concrete at the locations specified on the plans and as directed by the Engineer. The concrete shall have a minimum compressive strength as specified on the plans but not less than that specified for class SI concrete. This work shall also include the construction of necessary formwork and scaffolding and installing supplemental reinforcement bars and expansion bolts as directed by the Engineer.

The materials and construction methods shall conform to the applicable provisions of Sections 503 and 508 of the Standard Specifications. The coarse aggregate for Class SI concrete shall

be gradation CA 16 only, and a high range water-reducing admixture shall be used to obtain a 125-175 mm (5-7 in.) slump.

Construction Methods. The areas to be repaired shall have all loose, unsound concrete removed completely by the use of an electric chisel or other mechanical tools approved by the Engineer. All reinforcing bars within the repair area shall be undercut to a depth that will permit a minimum of 25 mm (1 in.) of plastic concrete under the reinforcing bars. When removing the existing concrete the Contractor shall provide a 25 mm (1 in.) deep saw cut along the outside edges of the repair area.

Existing reinforcement bars shall be cleaned by sandblasting. After cleaning, all exposed reinforcement shall be carefully evaluated to determine if replacement or additional reinforcement bars are required.

Reinforcing bars that have been cut or have lost 25 percent or more of their original cross sectional area shall be supplemented by new inkind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. An approved "squeeze type" mechanical bar splicer capable of developing in tension at least 125 percent of the yield strength of the existing bar shall be used when it is not feasible to provide the minimum bar lap. No welding of bars will be permitted. The furnishing and replacing of supplemental reinforcement bars shall be included in this item.

The formwork shall provide a smooth and uniform concrete finish most nearly matching the existing surface of the concrete structures. Formwork shall be completely mortar tight and closely fitted where they adjoin the existing concrete surface to prevent leakage. Air vents may be provided to reduce voids and improve surface appearance. The Contractor shall use exterior mechanical vibration, as approved by the Engineer, to release air pockets that may be entrapped.

Prior to placing the new concrete the Contractor shall prepare the surface of the existing concrete against which the new concrete is placed by sand, air or water blasting. The surface shall be free of oil, dirt and loose concrete. Just prior to concrete placement the surface shall be thoroughly wetted to a saturated surface dry condition or as directed by the Engineer.

Curing shall be done according to the applicable portions of Article 1020.13 of the Standard Specifications and as directed by the Engineer.

All areas of repair, under this item shall have a minimum concrete thickness of 25 mm (1 in.).

The Contractor shall anchor the new concrete to the existing concrete with 20 mm (3/4 in.) diameter expansion hook bolts for all overhead repair areas and wherever the depth of concrete removal is greater than 205 mm (8 in.). The expansion hook bolts shall be spaced at 380 mm (15 in.) maximum centers both vertically and horizontally. The furnishing and placing of the expansion hook bolts shall be included in this item.

At all locations, where the removal of deteriorated concrete reaches a total depth including all sides greater than 300 mm (12 in.) or half the depth of the member, the Bureau of Bridges and Structures shall be contacted for structural evaluation.

Method of Measurement. The completed formed concrete repair, accepted by the Engineer, will be measured in square meters (square feet). The computed area will include the formed and/or finished surface areas.

Basis of Payment. The above specified work shall be paid for at the contract unit prices per square meter (square foot) for FORMED CONCRETE REPAIR (DEPTH GREATER THAN 125 mm (5 in.)) and/or FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 125 mm (5 in.)) which prices shall include all labor and materials necessary to complete the work in place.

DECK SLAB REPAIR

Effective: May 15, 1995

Revised: January 1, 2002

This work shall consist of bituminous surface removal, when required, the removal and disposal of all loose and deteriorated concrete from bridge deck and the replacement with new concrete to the original top of deck. The work shall be done according to the applicable requirements of Sections 501, 503 and 1020 of the Standard Specifications and this Special Provision.

Deck slab repairs will be classified as follows:

- (a) Partial-Depth. Partial-depth repairs shall consist of removing the loose and unsound deck concrete, disposing of the concrete removed and replacing with new concrete. The removal may be performed by chipping with power driven hand tools or by hydro-scarification equipment. The depth shall be measured from the top of the concrete deck surface, at least 20 mm (3/4 in.) but not more than 1/2 the concrete deck thickness.
- (b) Full-Depth. Full-depth repairs shall consist of removing concrete full-depth of the deck, disposing of the concrete removed, and replacing with new concrete to the original concrete deck surface. The removal may be performed with power driven hand tools or by hydro-scarification equipment. Full-depth repairs shall be classified for payment as Full-Depth, Type I and Full-Depth, Type II according to the following:

Type I Full-depth patches less than or equal to 0.5 sq m (5 sq ft) in area. The minimum dimensions for a patch shall be 300 mm x 300 mm (1 ft X 1 ft).

Type II Full-depth patches greater than 0.5 sq m (5 sq ft) in area.

Materials.

Materials shall be according to Article 1020.02.

Portland cement concrete for partial and full-depth repairs shall be according to Section 1020. Class PP-1, PP-2, PP-3, or PP-4 concrete shall be used at the Contractor's option.

Grout. The grout for bonding new concrete to old concrete shall be proportioned by mass (weight) and mixed at the job site, or it may be ready-mixed if agitated while at the job site. The bonding grout shall consist of one part portland cement and one part sand, mixed with sufficient water to form a slurry. The bonding grout shall have a consistency allowing it to be scrubbed onto the prepared surface with a stiff brush or broom leaving a thin, uniform coating that will not run or puddle in low spots. Grout that can not be easily and evenly applied or has lost its consistency may be rejected by the Engineer. Grout that is more than two hours old shall not be used.

Equipment:

The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

- (a) Surface Preparation Equipment. Surface preparation and concrete removal equipment shall be according to the applicable portions of Section 1100 and the following:
 - (1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
 - (2) Blast Cleaning Equipment. The blast cleaning may be performed by wet sandblasting, high-pressure waterblasting, shotblasting or abrasive blasting. Blast cleaning equipment shall be capable of removing rust and old concrete from exposed reinforcement bars, and shall have oil traps.
 - (3) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 20 kg. (45 lb) class. Chipping hammers heavier than a nominal 6.8 kg. (15 lb) class shall not be used for removing concrete from below any reinforcing bar for partial depth repairs or final removal at the boundary of full-depth repairs. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.
 - (4) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a remote-controlled robotic device. The equipment may use river, stream or lake water. Operation of the equipment shall be performed and supervised by qualified personnel certified by the equipment manufacturer. Evidence of certification shall be presented to the Engineer. The equipment shall be capable of removing concrete to the specified depth and removing rust and concrete particles from exposed reinforcing bars. Hydro-scarification equipment shall be calibrated before being used and shall operate at a minimum of 124 MPa (18,000 psi).
- (b) Concrete Equipment: Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.
- (c) Finishing Equipment: Finishing equipment shall be according to Article 1103.17. Adequate hand tools will be permitted for placing and consolidating concrete in the patch areas and for finishing small patches.

Construction Requirements:

- (a) Bituminous Surface Removal.

The bituminous concrete surface course and all waterproofing membrane shall be removed and disposed of according to applicable portions of Articles 440.03 and 440.06, except milling equipment will not be allowed if the deck is to receive a waterproofing membrane system. If the overlay or waterproofing membrane contains asbestos fibers, removal shall be in accordance with the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Bituminous Concrete Surface Removal". Removal of the bituminous surface by the use of radiant or direct heat will not be permitted.

(b) Surface Preparation:

All loose, disintegrated and unsound concrete shall be removed from portions of the deck slab shown on the plans or as designated by the Engineer. The Engineer will determine the limits of removal as the work progresses.

If the Contractor elects to use hydro-scarification equipment, he/she shall be responsible for collecting and properly disposing of the runoff water generated. Runoff water will not be allowed to constitute a hazard on adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

The Contractor shall take care not to damage reinforcement bars or expansion joints which are to remain in place. Any damage to reinforcement bars or expansion joints shall be corrected at the Contractor's expense. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

- (1) Partial-Depth. Areas to be repaired will be determined and marked by the Engineer. A concrete saw shall be used to provide vertical edges approximately 20 mm (3/4 in.) deep around the perimeter of the area to be patched when an overlay is not specified. Where high steel is present, the depth may be reduced as directed by the Engineer. A saw cut will not be required on those boundaries along the face of the curb, parapet or joint or when sharp vertical edges are provided by hydro-scarification.

The loose and unsound concrete shall be removed by chipping, with power driven hand tools or by hydro-scarification equipment. All exposed reinforcing bars and newly exposed concrete shall be thoroughly blast cleaned. Where, in the judgment of the Engineer, the bond between existing concrete and reinforcement steel within the patch area has been destroyed, the concrete adjacent to the bar shall be removed to a depth that will permit new concrete to bond to the entire periphery of the exposed bar. A minimum of 25 mm (1 in.) clearance will be required. The Engineer may require enlarging a designated removal area should inspection indicate deterioration beyond the limits previously designated. In this event, a new saw cut shall be made around the extended area before additional removal is begun. The removal area shall not be enlarged solely to correct debonded reinforcement or deficient lap lengths.

- (2) Full-Depth. Concrete shall be removed as determined by the Engineer within all areas designated for full-depth repair and in all designated areas of partial depth repair in which unsound concrete is found to extend below half the concrete deck thickness. Full depth removal shall be performed according to Article 501.03. Saw cuts shall be made on the top of the deck, except those boundaries along the face of curbs, parapets and joints or where hydro-scarification provided sharp vertical edges. The top saw cut may be omitted if the deck is to receive an overlay.

Forms for full-depth repair may be supported by hangers with adjustable bolts or by blocking from the beams below. When approved by the Engineer, forms for Type 1 patches may be supported by No. 9 wires or other devices attached to the reinforcement bars.

All form work shall be removed after the curing sequence is complete and prior to opening to traffic.

- (3) Reinforcement Treatment. Care shall be exercised during concrete removal to protect the reinforcement bars and structural steel from damage. Any damage to the reinforcement bars or structural steel to remain in place shall be repaired or replaced to the satisfaction of the Engineer at the Contractor's expense. All existing reinforcement bars shall remain in place except as herein provided for corroded bars. Tying of loose bars will be required. Reinforcing bars which have been cut or have lost 25 percent or more of their original cross sectional area shall be supplemented by new in kind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. An approved "squeeze type" mechanical bar splice capable of developing in tension at least 125 percent of the yield strength of the existing bar shall be used when it is not feasible to provide the minimum bar lap. No welding of bars will be permitted.
- (4) Cleaning. Immediately after completion of the concrete removal and reinforcement repairs, the repair areas shall be cleaned of dust and debris. Once the initial cleaning is completed, the repair areas shall be thoroughly blast cleaned to a roughened appearance free from all foreign matter. Particular attention shall be given to removal of concrete fines. Any method of cleaning which does not consistently produce satisfactory results shall be discontinued and replaced by an acceptable method. All debris, including water, resulting from the blast cleaning shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final cleaning, the area shall be carefully protected with well-anchored polyethylene sheeting.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, or other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer.

(c) Placement & Finishing of Concrete Repair:

- (1) Grout Placement. After the repair areas have been cleaned and immediately prior to concrete placement, the grout shall be applied to a dampened surface. A thin layer of grout shall be thoroughly scrubbed into the deck surface. All vertical as well as horizontal surfaces shall receive a thorough, even coating. The rate of grout placement shall be limited so the brushed grout does not dry out before it is covered with concrete. Grout that has become dry and chalky shall be blast cleaned and replaced at the Contractor's expense. No concrete shall be placed over dry grout.

(2) Concrete Placement.

The concrete shall be placed and consolidated according to Article 503.07 and as herein specified. Article 1020.14 (b) shall apply, except for the requirement to use an approved retarding admixture when the plastic concrete reaches 30°C (85°F).

When an overlay system is not specified, the patches shall be finished according to Article 503.17 (c)(2)a., followed by a light brooming.

(d) Curing and Protection.

Concrete patches shall be cured by the Wetted Burlap Method according to Article 1020.13 (a)(3), and the curing period shall be 72 hours. In addition to Article 1020.13, when the air temperature is less than 13° C (55° F), the Contractor shall cover the patch with minimum R12 insulation. Insulation is optional when the air temperature is 13° C - 32° C (55° F. - 90° F). Insulation shall not be placed when the air temperature is greater than 32° C (90° F). A 72-hour minimum drying period shall be required before placing waterproofing or bituminous surfacing.

(e) Opening to Traffic.

No traffic will be permitted on a patch until after the specified cure period, and the concrete has obtained a minimum compressive strength of 27.6 MPa (4000 psi) or flexural strength of 4.65 MPa (675 psi).

Construction equipment will be permitted on a patch during the cure period if the concrete has obtained the minimum required strength. In this instance, the strength specimens shall be cured with the patch.

Method of Measurement.

When specified, bituminous surface removal and full or partial depth repairs will be measured for payment and computed in square meters (square yards).

Basis of Payment.

The bituminous concrete surface removal will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE REMOVAL (DECK). Areas removed and replaced up to and including a depth of half the concrete deck thickness will be paid for at the contract unit price per square meter (square yard) for DECK SLAB REPAIR (PARTIAL). Areas requiring removal greater than a depth of half the concrete deck thickness shall be removed and replaced full depth and will be paid for at the contract unit price per square meter (square yard) for DECK SLAB REPAIR (FULL DEPTH, TYPE I) and/or DECK SLAB REPAIR (FULL DEPTH, TYPE II).

When corroded reinforcement bars are encountered in the performance of this work and replacement is required, the Contractor will be paid according to Article 109.04.

No payment will be allowed for removal and replacement of reinforcement bars damaged by the Contractor in the performance of his/her work or for any increases in dimensions needed to provide splices for these replacement bars.

Removal and disposal of asbestos waterproofing and/or asbestos bituminous concrete will be paid for as specified in the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Bituminous Concrete Surface Removal".

BRIDGE DECK MICROSILICA CONCRETE OVERLAY

Effective: May 15, 1995

Revised: August 21, 2002

Description. This work shall consist of the preparation of the existing concrete bridge deck and the construction of a microsilica concrete overlay to the specified thickness. The minimum thickness of the overlay shall be 60 mm (2 1/4 in.).

Materials. Materials shall meet the requirements of the following Articles of Section 1000:

<u>Item</u>	<u>Article/Section</u>
(a) Microsilica	1014
(b) Portland Cement (Notes 1-6)	1020
(c) Grout (Note 7)	
(d) Rapid Set Materials (Note 8)	
(e) Concrete Curing Materials (Note 9)	

Note 1: Cement shall be Type I portland cement. Fine aggregate shall be natural sand and the coarse aggregate shall be crushed stone or crushed gravel. The gradation of the coarse aggregate shall be CA 11, CA 13, CA 14 or CA 16.

Note 2: Mix Design Criteria.

Article 1020.04 shall not apply. The microsilica concrete mix design shall meet the following requirements:

Cement Factor	335 kg/cu m (565 lb/cu yd)
Microsilica Solids	20 kg/cu m (33 lb/cu yd)
Water/Cement Ratio (including water in the slurry)	0.37 to 0.41
Mortar Factor	0.88 to 0.92
Slump	75 to 150 mm (3 to 6 in.)
Air Content	5.0 to 8.0 percent
Compressive Strength (14 days)	27,500 kPa (4000 psi) minimum
Flexural Strength (14 days)	4,650 kPa (675 psi) minimum

Note 3: Admixtures.

Article 1020.05(b) shall apply except as follows:

High-range water reducing admixtures (superplasticizers) shall be added as determined by the Engineer.

Note 4: Fly Ash.

Article 1020.05(c) shall apply except as follows:

Only Class C fly ash may be used to partially replace portland cement. The amount of cement replaced and replacement ratio shall be the same as for bridge decks.

Note 5: Ground Granulated Blast-Furnace Slag.

Ground granulated blast-furnace slag shall not be used.

Note 6: Mixing.

The mixing requirements shall be according to Article 1020.11(d), except as follows:

(a) Water-based microsilica slurry:

(1) Truck Mixer:

- Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.
- Add remaining water.
- Mix 30-40 revolutions at 12-15 RPM.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

(2) Stationary Mixer:

- The microsilica slurry shall be diluted into the water stream or weigh box prior to adding into mixer. Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.
- Add remaining water.
- After mixing cycle is completed deposit into truck mixer.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

(b) Densified microsilica (bulk):

(1) Truck Mixer:

- Same as (a)1 above except the densified microsilica shall be added with the cement.

(2) Stationary Mixer:

- Same as (a)2 above except the densified microsilica shall be added with the cement.

(c) Densified microsilica (bag):

Bagged microsilica shall be kept dry. No bag or material containing moisture shall be introduced into the concrete mixer.

(1) Truck Mixer:

- Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80 percent of the water.
- Add cement, fly ash (if used), and aggregates.
- Add remaining water.
- Mix 30-40 revolutions at 12-15 RPM.
- Add microsilica.
- Mix 70-80 revolutions at 12-15 RPM.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

(2) Stationary Mixer:

- Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80% of the water.
- Add cement, fly ash (if used), and aggregates.
- Add remaining water.
- After mixing cycle is completed deposit into truck mixer.
- Add microsilica to truck.
- Mix 70-80 revolutions at 12-15 RPM.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

Note 7: Grout. The grout for bonding new concrete to old concrete shall be proportioned by mass (weight) and mixed at the job site, or it may be ready-mixed if agitated while at the job site. The bonding grout shall consist of one part portland cement and two parts sand, mixed with sufficient water to form a slurry. The bonding grout shall have a consistency allowing it to be scrubbed onto the prepared surface with a stiff brush or broom leaving a thin, uniform coating that will not run or puddle in low spots. Grout that can not be easily and evenly applied or has lost its consistency may be rejected by the Engineer. Grout that is more than two hours old shall not be used.

At the option of the Contractor the grout may be applied by mechanical applicators. If this option is chosen, the sand shall be eliminated from the grout mix.

Note 8: Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs.

Note 9: Cotton mats shall consist of a cotton fill material, minimum 400 g/sq m (11.8 oz/sq yd), covered with unsized cloth or burlap, minimum 200 g/sq m (5.9 oz/sq yd), and be tufted or stitched to maintain stability. Cotton mats shall be free from tears and in good condition.

Equipment: The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

(a) Surface Preparation Equipment. Surface preparation equipment shall be according to the applicable portions of Section 1100 and the following:

(1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

- (2) Mechanical Blast Cleaning Equipment. Mechanical blast cleaning may be performed by high-pressure waterblasting or shotblasting. Mechanical blast cleaning equipment shall be capable of removing weak concrete at the surface, including the microfractured concrete surface layer remaining as a result of mechanical scarification, and shall have oil traps.

Mechanical high-pressure waterblasting equipment shall be mounted on a wheeled carriage and shall include multiple nozzles mounted on a rotating assembly. The distance between the nozzles and the deck surface shall be kept constant and the wheels shall maintain contact with the deck surface during operation.

- (3) Hand-Held Blast Cleaning Equipment. Blast cleaning using hand-held equipment may be performed by high-pressure waterblasting or abrasive blasting. Hand-held blast cleaning equipment shall have oil traps.

Hand-held high-pressure waterblasting equipment that is used in areas inaccessible to mechanical blast cleaning equipment shall have a minimum pressure of 48 MPa (7,000 psi).

- (4) Mechanical Scarifying Equipment. Scarifying equipment shall be a power-operated, mechanical scarifier capable of uniformly scarifying or removing the old concrete surface and new patches to the depths required in a satisfactory manner. Other types of removal devices may be used if their operation is suitable and they can be demonstrated to the satisfaction of the Engineer.

- (5) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a remote-controlled robotic device. The equipment shall use potable water according to Section 1002. Operation of the equipment shall be performed and supervised by qualified personnel certified by the equipment manufacturer. Evidence of certification shall be presented to the Engineer. The equipment shall be capable of removing concrete to the specified depth and be capable of removing rust and old concrete particles from exposed reinforcement bars. The hydro-scarification equipment shall be calibrated before being used and shall operate at a uniform pressure sufficient to remove the specified depth of concrete in a timely manner.

- (6) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 20 kg. (45 lb) class. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.

- (b) Pull-off Test Equipment. Equipment used to perform pull-off testing shall be either approved by the Engineer, or obtained from one of the following approved sources:

James Equipment
007 Bond Tester
800-426-6500

Germann Instruments, Inc.
BOND-TEST Pull-off System
847-329-9999

SDS Company
DYNA Pull-off Tester
805-238-3229

Pull-off test equipment shall include all miscellaneous equipment and materials to perform the test and clean the equipment, as indicated in the Illinois Pull-off Test (Surface or Overlay Method). Prior to the start of testing, the Contractor shall submit to the Engineer a technical data sheet and material safety data sheet for the epoxy used to perform the testing. For solvents used to clean the equipment, a material safety data sheet shall be submitted.

(c) Concrete Equipment. Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.

(d) Finishing Equipment. Finishing equipment shall be according to Article 503.03.

(e) Mechanical Fogging Equipment. Mechanical fogging equipment shall consist of a mechanically operated, pressurized system using a triple headed nozzle or an equivalent nozzle. The fogging nozzle shall be capable of producing a fine fog mist that will increase the relative humidity of the air just above the fresh concrete surface without accumulating any water on the concrete. The fogging equipment shall be mounted on either the finishing equipment or a separate foot bridge. Controls shall be designed to vary the volume of water flow, be easily accessible and immediately shut off the water when in the off position.

(f) Hand-Held Fogging Equipment. Hand-held fogging equipment shall use a triple headed nozzle or an equivalent nozzle. The fogging nozzle shall be capable of producing a fine fog mist that will increase the relative humidity of the air just above the fresh concrete surface without accumulating any water on the concrete.

Construction Requirements: Sidewalks, curbs, drains, reinforcement and/or existing transverse and longitudinal joints which are to remain in place shall be protected from damage during scarification and cleaning operations. All damage caused by the Contractor shall be corrected, at the Contractor's expense, to the satisfaction of the Engineer.

(a) Deck Preparation:

(1) Bridge Deck Scarification. The scarification work shall consist of removing the designated concrete deck surface using mechanical or hydro-scarifying equipment as specified. The areas designated shall be scarified uniformly to the depth as specified on the plans. In areas of the deck not accessible to the scarifying equipment, power-driven hand tools will be permitted. Power driven hand tools shall be used for removal around areas to remain in place.

A trial section on the existing deck surface will be designated by the Engineer to demonstrate that the equipment, personnel and methods of operation are capable of producing results satisfactory to the Engineer. The trial section will consist of approximately 3 sq m (30 sq ft).

Once the settings for the equipment are established, they shall not be changed without the permission of the Engineer. The removal shall be verified, as necessary, at least every 5 m (16 ft) along the cutting path. If concrete is being removed below the desired depth, the equipment shall be reset or recalibrated.

If the use of hydro-scarification equipment is specified, the Contractor may use mechanical scarification equipment to remove an initial depth of concrete provided

that the last 13 mm ($\frac{1}{2}$ in.) of removal is accomplished with hydro-scarification equipment. If the Contractor's use of mechanical scarifying equipment results in exposing, snagging, or dislodging the top mat of reinforcing steel, the scarifying shall be stopped immediately and the remaining removal shall be accomplished using the hydro-scarification equipment. All damage to the existing reinforcement resulting from the Contractor's operation shall be repaired or replaced at the Contractor's expense as directed by the Engineer. Replacement shall include the removal of any additional concrete required to position or splice the new reinforcing steel. Undercutting of exposed reinforcement bars shall only be as required to replace or repair damaged or corroded reinforcement. Repairs to existing reinforcement shall be according to the Special Provision for "Deck Slab Repair".

The Contractor shall collect and properly dispose of the runoff water generated by the hydro-scarification operation according to Article 202.03.

- (2) Deck Patching. After bridge deck scarification, all designated patching, except as note below, shall be completed according to the Special Provision for "Deck Slab Repair". All full depth patching shall be completed prior to final surface preparation. When mechanical scarification is specified, partial depth patches may be fill with overlay material at the time of overlay placement.

All patches placed prior to overlay placement shall be struck off and then roughened with a suitable stiff bristled broom or wire brush to provide a rough texture designed to promote bonding of the overlay. Hand finishing of the patch surface shall be kept to a minimum to prevent overworking of the surface.

After scarification, the deck shall be thoroughly cleaned of broken concrete and other debris. The Engineer will sound the scarified deck and all remaining unsound areas will be marked for additional removal and/or repairs as applicable. If the bottom mat of reinforcement is exposed, that area shall be defined as a full depth repair.

In areas where hydro-scarification is specified, it will be assumed that the hydro-scarification process will perform the partial depth removal simultaneously with the scarification operation. No separate payment for partial depth patching will be made regardless of whether it was detailed in the plans or not. Any removal required or made below the specified depth for scarification of the bridge deck, which does not result in full depth patching, shall be included in the pay item for Bridge Deck Hydro Scarification and shall be filled with the overlay material at the time of the overlay placement.

- (3) Final Surface Preparation. Final surface preparation shall consist of the operation of mechanical blast cleaning equipment to remove any weak concrete at the surface, including the microfractured concrete surface layer remaining as a result of mechanical scarification. Any areas determined by the Engineer to be inaccessible to mechanical equipment shall be thoroughly blast cleaned with hand-held equipment. When hydro-scarification equipment is used for concrete removal, the deck surface need not be blast cleaned with mechanical equipment unless the spoils from the scarification operation are allowed to dry and re-solidify on the deck surface.

Final surface preparation shall also include the cleaning of all dust, debris, and concrete fines from the deck surface including vertical faces of curbs, previously

placed adjacent overlays, barrier walls up to a height of 25 mm (1 in.) above the overlay, depressions, and beneath reinforcement bars. Hand-held high-pressure waterblasting equipment shall be used for this operation.

If mechanical scarification is used to produce the final deck surface texture, surface pull-off testing will be required. After the final surface preparation has been completed and before placement of the overlay, the prepared deck surface will be tested by the Engineer according to the Illinois Pull-off Test (Surface Method). The Contractor shall provide the test equipment.

- a. Start-up Testing. Prior to the first overlay placement, the Engineer will evaluate the blast cleaning method. The start-up area shall be a minimum of 56 sq m (600 sq ft). After the area has been prepared, six random test locations will be determined by the Engineer, and tested according to the Illinois Pull-off Test (Surface Method).

The average of the six tests shall be a minimum of 1,207 kPa (175 psi) and each individual test shall have a minimum strength of 1,103 kPa (160 psi). If the criteria are not met, the Contractor shall adjust the blast cleaning method. Start-up testing will be repeated until satisfactory results are attained.

Once an acceptable surface preparation method is established, it shall be continued for the balance of the work. The Contractor may, with the permission of the Engineer, change the surface preparation method, in which case, additional start-up testing will be required.

- b. Lot Testing. After start-up testing has been completed, the following testing frequency will be used. For each structure, each stage will be divided into lots of not more than 420 sq m (4500 sq ft). Three random test locations will be determined by the Engineer for each lot, and tested according to the Illinois Pull-off Test (Surface Method).

The average of the three tests shall be a minimum of 1,207 kPa (175 psi) and each individual test shall have a minimum strength of 1,103 kPa (160 psi). In the case of a failing individual test or a failing average of three tests, the Engineer will determine the area that requires additional surface preparation by the Contractor. Additional test locations will be determined by the Engineer.

In addition to start-up and lot testing, the Department may require surface pull-off testing of areas inaccessible to mechanical blast cleaning equipment and blast cleaned with hand-held equipment. The Engineer shall determine each test location, and each individual test shall have a minimum strength of 1,207 kPa (175 psi).

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, and other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

All dust, concrete fines, debris, including water, resulting from the surface preparation shall be confined and shall be immediately and thoroughly removed from

all areas of accumulation. If concrete placement does not follow immediately after the final surface preparation, the area shall be carefully protected with well-anchored white polyethylene sheeting.

- (b) Pre-placement Procedure. Prior to placing the overlay, the Engineer will inspect the deck surface. All contaminated areas shall be blast cleaned again at the Contractor's expense.

Before placing the overlay, the finishing machine shall be operated over the full length of bridge segment to be overlaid to check support rails for deflection and confirm the minimum overlay thickness. All necessary adjustments shall be made and another check performed, unless otherwise directed by the Engineer.

- (c) Placement Procedure:

- (1) Bonding Methods. The Contractor shall prepare the deck prior to overlay placement by one of the following methods unless restricted as specified on the plans:

- a. Grout Method. The deck shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition for at least 12 hours before placement of the grout is started. Any excess water shall be removed by compressed air or by vacuuming prior to grout placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the grout. Immediately before placing the overlay mixture, the exposed area shall be thoroughly covered with a thin layer of grout. The grout shall be thoroughly scrubbed into the surface. All vertical as well as horizontal surfaces shall receive a thorough, even coating. The rate of grout placement shall be limited so the brushed grout does not dry out before it is covered with the concrete.

Grout that is allowed to become dry and chalky shall be blast cleaned and replaced at the Contractor's expense. No concrete shall be placed over dry grout.

- b. Direct Bond Method. The deck shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition for at least 12 hours before placement of the overlay. Any excess water shall be removed by compressed air or by vacuuming prior to beginning overlay placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the overlay.

- (2) Overlay Placement. For the overlay pour, fogging equipment shall be in operation unless the evaporation rate is less than 0.5 kg/sq m/hr. (0.1 lb./sq ft/hr.) and the Engineer gives permission to turn off the equipment. The evaporation rate shall be determined according to the figure in the Portland Cement Association's publication, "Design and Control of Concrete Mixtures" (refer to the section on plastic shrinkage cracking).

The fogging equipment shall be adjusted to adequately cover the entire width of the pour.

Hand-held fogging equipment shall be allowed only when a vibratory screed is used. The fog mist shall not be used to apply water to a specific location to aid finishing.

Placement of the concrete shall be a continuous operation throughout the pour. The

overlay shall be placed as close to its final position as possible and then mechanically consolidated and screeded to final grade. All finishing and texturing shall be according to Article 503.17.

Internal vibration shall be performed along edges, adjacent to bulkheads, and where the overlay thickness exceeds 75 mm (3 in.). Internal vibration along the longitudinal edges of a pour shall be performed with a minimum of 2 hand-held vibrators, one on each edge of the pour. Hand finishing shall be performed along the edges of the pour and shall be done from sidewalks, curbs or work bridges.

A construction dam or bulkhead shall be installed in case of a delay of 30 minutes or more in the concrete placement operation. If there is a delay of more than ten minutes during overlay placement, wet burlap shall be used to protect the concrete until operations resume.

Concrete placement operations shall be coordinated to limit the distance between the point of concrete placement and concrete covered with cotton mats for curing. The distance shall not exceed 10.5 m (35 ft). For overlay pour widths greater than 15 m (50 ft), the distance shall not exceed 7.5 m (25 ft).

All construction joints shall be formed. When required by the Engineer the previously placed overlay shall be sawed full-depth to a straight and vertical edge before fresh concrete is placed. The Engineer will determine the extent of the removal. When longitudinal joints are not shown on the plans, the locations shall be subject to approval by the Engineer and shall not be located in the wheel paths.

The Contractor shall stencil the date of construction (month and year) and the appropriate letters MS, or MSFA when fly ash is used in the mix design, into the overlay before it takes its final set. The stencil shall be located in a conspicuous location, as determined by the Engineer, for each stage of construction. This location shall be outside of the grooving where possible and within 1 m (3 ft) of an abutment joint. The characters shall be 75 mm to 100 mm (3 to 4 in.) in height, 5 mm (1/4 in.) in depth and face the centerline of the roadway.

(3) Limitations of Operations:

- a. Weather limitations. Concrete shall not be placed unless the deck temperature is above 10°C (50°F) and the air temperature is predicted to be above 10°C (50°F) for at least 12 hours after placement. The concrete shall be maintained at a minimum of 10°C (50°F) during the curing period according to Article 1020.13. The temperature of the concrete mixture as placed shall not be less than 10°C (50°F) nor more than 32°C (90°F). If night placement is required, illumination and placement procedures will be subject to approval of the Engineer. No additional compensation will be allowed if night work is required.
- b. Other Limitations. Concrete delivery trucks shall be limited to a maximum load of 4.6 cu m (6 cu yd).

Truck mixers, concrete pumps, or other heavy equipment will not be permitted on any portion of the deck where the top reinforcing mat has been exposed. Conveyors, buggy ramps and pump piping shall be installed in a way that will not

displace undercut reinforcement bars. Air compressors may be operated on the deck only if located directly over a pier and supported off undercut reinforcement bars. Compressors will not be allowed to travel over undercut reinforcement bars.

Concrete removal may proceed during final cleaning and concrete placement on adjacent portions of the deck, provided the removal does not interfere in any way with the cleaning or placement operations.

If water or contaminants from the hydro-scarification flow into the area of final cleaning or concrete placement, hydro-scarification shall be suspended until the concrete has been placed and has cured a minimum of 24 hours. No concrete shall be removed within 1.8 m (6 ft) of a newly-placed overlay until the concrete has obtained a minimum compressive strength of 20,700 kPa (3000 psi) or flexural strength of 4,150 kPa (600 psi).

- (4) Curing Procedure. After the surface of the concrete has been textured, it shall be covered immediately with dry cotton mats. The cotton mats shall then be wetted immediately with a gentle spray of water. The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to prevent marring of the surface.

Once the concrete has sufficiently hardened, soaker hoses shall be placed on top of the cotton mats and the cotton mats kept continuously wet for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After the placement of soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets meeting the requirements of Articles 1022.04 and 1022.05 respectively. The surface shall be continuously wet cured for at least 7 days.

- (5) Opening to Traffic. No traffic or construction equipment will be permitted on the overlay until after the specified cure period and the concrete has obtained a minimum compressive strength of 27,500 kPa (4000 psi) or flexural strength of 4,650 kPa (675 psi) unless permitted by the Engineer.
- (6) Overlay Testing. The Engineer reserves the right to conduct pull-off tests on the overlay to determine if any areas are not bonded to the underlying concrete, and at a time determined by the Engineer. The overlay will be tested according to the Illinois Pull-off Test (Overlay Method), and the Contractor shall provide the test equipment. Each individual test shall have a minimum strength of 1,034 kPa (150 psi). Unacceptable test results will require removal and replacement of the overlay at the Contractor's expense, and the locations will be determined by the Engineer. When removing portions of an overlay, the saw cut shall be a minimum depth of 25 mm (1 in.).

If the overlay is to remain in place, all core holes due to testing shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent material.

For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume; or a packaged rapid set mortar shall be used. For a rapid set concrete mixture, a packaged rapid set mortar shall be combined with coarse aggregate according to the manufacturer's instructions; or a packaged rapid set concrete shall be used. Mixing of a rapid set mortar or concrete shall be according to the manufacturer's instructions.

Method of Measurement. The areas of mechanical and/or hydro scarification on the bridge deck will be measured for payment in square meters (square yards). No additional payment will be made for multiple passes of the equipment required to achieve the specified scarification depth.

The concrete overlay will be measured for payment in square meters (square yards).

When Bridge Deck Hydro-Scarification is specified, the additional concrete placed with the overlay, required to fill all depressions below the specified thickness will be measured for payment in cubic meters (cubic yards). The volume will be determined by subtracting the theoretical volume of the overlay from the ticketed volume of overlay delivered minus the volume estimated by the Engineer left in the last truck at the end of the overlay placement. The theoretical cubic meter (cubic yard) quantity for the overlay will be determined by multiplying the plan surface area of the overlay times the specified thickness of the overlay.

Basis of Payment. Concrete scarification of the bridge deck using mechanical scarification equipment will be paid for at the contract unit price per square meter (square yard) for CONCRETE BRIDGE DECK SCARIFICATION of the thickness specified. Concrete scarification of the bridge deck using hydro scarification equipment will be paid for at the contract unit price per square meter (square yard) for BRIDGE DECK HYDRO-SCARIFICATION of the thickness specified.

Microsilica concrete overlay will be paid for at the contract unit price per square meter (square yard) for BRIDGE DECK MICROSILICA CONCRETE OVERLAY, of the thickness specified. When hydro-scarification equipment is used, the additional volume of overlay required to fill all depressions below the specified thickness will be paid for at the Contractor's actual material cost for the microsilica concrete per cubic meter (cubic yard) plus 15 percent.

When mechanical scarification equipment is used, additional partial depth patches poured monolithically with the overlay will be paid for at the contract unit price bid per square meter (square yard) for DECK SLAB REPAIR (PARTIAL).

When the Engineer conducts pull-off tests on the overlay and they are acceptable, Contractor expenses incurred due to testing and for filling core holes will be paid according to Article 109.04. Unacceptable pull-off tests will be at the Contractor's expense.

When specified, the Contractor has the option of choosing the type of overlay. The options will be limited to those specified in the plans and will be paid for at the contract unit price per square meter (square yard) for BRIDGE DECK CONCRETE OVERLAY OPTION, of the thickness specified.

Overlay material placed off the deck in abutment backwalls, and/or other locations will not be measured for payment but will be included in the pay item involved.

SILICONE BRIDGE JOINT SEALER

Effective: August 1, 1995

Revised: January 1, 2002

Description. This work shall consist of furnishing all labor, equipment, technical assistance and materials necessary to install the silicone joint sealer as shown on the plans and as specified herein.

When specified, a polymer concrete nosing compatible with the silicone sealant as required by the sealant manufacturer shall be installed. The minimum dimensions for a polymer concrete nosing cross section are 40 mm (1 1/2 in.) deep by 90 mm (3 1/2 in.) wide. The polymer concrete shall be furnished and installed according to the Special Provision for "Polymer Concrete".

Materials:

- (a) Silicone Joint Sealer. The silicone joint sealer shall be rapid cure, self-leveling, cold applied, two component silicone sealant. The sealant, upon curing, shall demonstrate resilience, flexibility and resistance to moisture and puncture. The sealant shall also demonstrate excellent adhesion to portland cement concrete, polymer concrete and steel over a range of temperatures from -34 to 54°C (-30 to 130°F) while maintaining a watertight seal. The sealant shall not contain any solvents or diluents that cause shrinkage or expansion during curing. Acid cure sealants are not acceptable. The date of manufacture shall be provided with each lot. Materials twelve months old or older from the date of manufacture will not be accepted. The manufacturer shall certify that the sealant meets or exceeds the following test requirements before installation begins. The Department reserves the right to test representative samples from material proposed for use.

Physical Properties:

Each component as supplied:

Specific Gravity (ASTM D1475)	1.3-1.4
Extrusion Rate (MIL-5-8802)	200 - 550 grams per minute
Flow	Self-leveling

Durometer Hardness, Shore (ASTM D 2240)	40-80
"00" (0° and 25°C ± 1°C (77±3°F.))	

Ozone and U.V. (ASTM C 793-75)	No chalking, cracking or
Resistance	bond loss after 5,000 hours.

After Mixing:

Tack Free Time (ASTM C679)	60 minutes max.
Joint Cure Rate (% of total cure)	50% within 4 - 6 hours
	75% within 24 hours
	100% within 48 - 160 hours

Upon Complete Cure: (ASTM D-3583¹)

Joint Elongation (adhesion to concrete/steel/polymer concrete)	600% min
Joint Modulus	21-83 kPa (3-12 psi) @ 100% elongation

¹Modified; Sample cured 2 days at 25±1°C (77±2°F) 50±5% relative humidity

- (b) Backer Rod. The backer rod shall conform to ASTM D5249, Type 3.

CONSTRUCTION REQUIREMENTS

General. Technical assistance provided by the manufacturer during surface preparation and installation shall be furnished at no additional cost to the Department. The Contractor shall furnish the Engineer with the manufacturer's written product information, installation procedures, and instructional video at least two weeks prior to installation. The Contractor, the manufacturer's representative, and the Engineer shall meet to review and clarify installation procedures, and requirements prior to starting the work. A technical representative must be present for the start of surface preparations and installation for at least one day. The Contractor shall contact the manufacturer at least two weeks prior to installation.

When placing the silicone against concrete, the concrete surface shall be dry. For newly placed concrete, the concrete shall be fully cured and allowed to dry out a minimum of 7 additional days prior to placement of the silicone. Cold, wet, inclement weather will require an extended drying time.

(a) Surface Preparation:

- (1) Sandblasting. Both faces of the joint shall be sandblasted. A separate pass for each face for the full length of the joint and to the design depth of the center of the backer rod will be required. The nozzle shall be held at an angle of 30-90 degrees to the joint face, at a distance of 25-50 mm (1 - 2 in.).

For portland cement concrete and polymer concrete surfaces, sandblasting will be considered acceptable when both joint faces have a roughened surface with clean, exposed aggregate. The surface shall be free of foreign matter or plastic residue.

For steel surfaces, sandblasting will be considered acceptable when the steel surfaces have been cleaned to an SSPC-SP10 degree of cleanliness.

After sandblasting is completed, the joint shall be cleaned of debris using compressed air with a minimum pressure of 620 kPa (90 psi). The air compressor shall be equipped with traps to prevent the inclusion of water and/or oil in the air line.

- (2) Priming. This operation will immediately follow sandblasting and cleaning and will only be permitted to proceed with the air and substrate temperatures are at least 5°C (41°F) and rising. Sandblasting, priming and sealing must be performed on the same day. The entire sandblasted surface shall be primed using a brush applied primer. The primer shall be allowed to dry a minimum of one hour or more until it is thoroughly dry, whichever is longer, before proceeding. For steel surfaces, the minimum drying time shall be extended to 90 minutes when the substrate temperature is below 15°C (60°F).

For portland cement concrete and polymer concrete, the primer shall be in according to the manufacturer's recommendations. For steel surfaces, the primer shall be a rust inhibiting primer recommended by the sealant manufacturer.

The primer shall be supplied in original containers and shall have a "use-by" date clearly marked on them. Only primer, freshly poured from the original container into clean pails will be permitted. The primer must be used immediately. All primer left in the pail after priming shall be disposed of and shall not be reused.

(b) Joint Installation:

- (1) Backer Rod Placement. The backer rod shall be installed to a uniform depth as specified on the plans and as recommended by the manufacturer. All splices in the backer rod shall be taped to prevent material loss during sealing. The backer rod shall be installed to within 3 mm (1/8 in.) tolerance prior to sealing.
- (2) Sealant Placement. The sealant shall be 13 mm (1/2 in.) thick within ± 3 mm (1/8 in.) tolerance as measured in the center of the joint at the thinnest point. The sealant thickness shall be measured during installation every ± 600 mm (± 2 ft). Adjustments to correct sealant thickness to within tolerance shall be made immediately before the sealant begins to set up. Sealant placement will only be permitted when the air and substrate temperatures are above 5°C (41°F) and 2.8°C (5°F) above the dew point. The joint must be kept clean and dry during sealing. If the joint becomes wet and/or dirty during sealing, the operation will be halted until the joint has been restored to a clean and dry state.

Sealing shall be performed using a pneumatic gun approved by the sealant manufacturer. Prior to sealing, the gun shall be inspected to insure that it is in proper working order and that it is being operated at the recommended air pressure.

The gun must demonstrate proper mixing action before sealant will be allowed into the joint. Unmixed sealant will not be permitted in the joint. All unmixed sealant found in the joint will be removed and replaced at the Contractors expense.

After the Engineer has determined that the pneumatic gun is functioning properly, the joint shall be sealed to the thickness and depth as shown on the plans. The sealant must be allowed to achieve initial set before opening the joint to traffic.

End of seal treatment at vertical faces of curbs, sidewalks or parapets shall be as recommended by the manufacturer and as shown on the plans.

Sealant placed incorrectly shall be removed and replaced by the Contractor at no additional cost to the Department.

- (3) Field Testing. A minimum of one joint per bridge per joint configuration will be tested by the Engineer by performing a Pull Test. The sealant shall be allowed to cure for a minimum of 24 hours before testing. The locations for the tests will be determined by the Engineer. The tests will be performed per the manufacture's written instructions. As part of the test, the depth and thickness of the sealant will be verified. All joint system installations failing to meet the specifications shall be removed and replaced, by the Contractor, to the satisfaction of the Engineer at no additional cost to the Department. In addition, the "Pull Test" is a destructive test, the Contractor shall repair the joint after completion of the test per the manufacturer's written instructions at no additional cost to the Department.

Method of Measurement. The installed joint sealer will be measured in meters (feet) along the centerline of the joint.

Basis of Payment. The silicone joint sealer measured as specified will be paid for at the contract unit price per meter (foot) for SILICONE JOINT SEALER, of the size specified. When a polymer concrete nosing is specified it shall not be included in this item but will be paid for according to the Special Provision for "Polymer Concrete".

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)

Effective: September 1, 2000

Revised: October 1, 2002

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR part 26 and listed in the DBE Directory or most recent addendum.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor:

The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of federally-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal is 12.14% of all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve this goal. The dollar amount paid to all approved DBE firms performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. This determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 8.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract,

the Department will award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set forth in this Special Provision:

- (a) The bidder documents that firmly committed DBE participation has been obtained to meet the goal; or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders may consult the DBE Directory as a reference source for DBE companies certified by the Department. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's web site at www.dot.state.il.us.

BIDDING PROCEDURES. Compliance with the bidding procedures of this Special Provision is required prior to the award of the contract and the failure of the as-read low bidder to comply will render the bid nonresponsive.

- (a) In order to assure the timely award of the contract, the as-read low bidder must submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven (7) working days after the date of letting. To meet the seven (7) day requirement, the bidder may send the Plan by certified mail or delivery service within the seven (7) working day period. If a question arises concerning the mailing date of a Plan, the mailing date will be established by the U.S. Postal Service postmark on the original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the as-read low bidder to ensure that the postmark or receipt date is affixed within the seven (7) working days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Plan is to be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). It is the responsibility of the bidder to obtain confirmation of telefax delivery. The Department will not accept a Utilization Plan if it does not meet the seven (7) day submittal requirement, and the bid will be declared nonresponsive. In the event the bid is declared nonresponsive due to a failure to submit a Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.

- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:
- (1) The name and address of each DBE to be used;
 - (2) A description, including pay item numbers, of the commercially useful work to be done by each DBE;
 - (3) The price to be paid to each DBE for the identified work specifically stating the quantity, unit price and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
 - (4) A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and
 - (5) If the bidder is a joint venture comprised of DBE firms and non-DBE firms, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s).
- (d) The contract will not be awarded until the Utilization Plan submitted by the bidder is approved. The Utilization Plan will be approved by the Department if the Plan commits sufficient commercially useful DBE work performance to meet the contract goal. The Utilization Plan will not be approved by the Department if the Plan does not commit sufficient DBE performance to meet the contract goal unless the bidder documents that it made a good faith effort to meet the goal. The good faith procedures of Section VIII of this special provision apply. If the Utilization Plan is not approved because it is deficient in a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no less than a five (5) working day period in order to cure the deficiency.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100% goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE firm does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100% goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

- (c) DBE as a subcontractor: 100% goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontractor in turn subcontracts to a non-DBE firm does not count toward the DBE goal.
- (d) DBE as a trucker: 100% goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed and insured by the DBE must be used on the contract. Credit will be given for the full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non-DBE company.
- (e) DBE as a material supplier:
 - (1) 60% goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100% goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100% credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

GOOD FAITH EFFORT PROCEDURES. If the bidder cannot obtain sufficient DBE commitments to meet the contract goal, the bidder must document in the Utilization Plan the good faith efforts made in the attempt to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which could reasonably be expected to obtain sufficient DBE participation. The Department will consider the quality, quantity and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts are not good faith efforts; rather, the bidder is expected to have taken those efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.
 - (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
 - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

- (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
 - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal.
- (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the Contractor has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will designate a

five (5) working day period during which the bidder shall take additional efforts. The bidder is not limited by a statement of additional efforts, but may take other action beyond any stated additional efforts in order to obtain additional DBE commitments. The bidder shall submit an amended Utilization Plan if additional DBE commitments to meet the contract goal are secured. If additional DBE commitments sufficient to meet the contract goal are not secured, the bidder shall report the final good faith efforts made in the time allotted. All additional efforts taken by the bidder will be considered as part of the bidder's good faith efforts. If the bidder is not able to meet the goal after taking additional efforts, the Department will make a pre-final determination of the good faith efforts of the bidder and will notify the designated responsible company official of the reasons for an adverse determination.

- (c) The bidder may request administrative reconsideration of a pre-final determination adverse to the bidder within the five (5) working days after the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The pre-final determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. In addition, the request shall be considered a consent by the bidder to extend the time for award. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten (10) working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid nonresponsive.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal.

- (a) No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.

- (b) All work indicated for performance by an approved DBE shall be performed, managed and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to find another DBE to substitute for the terminated DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.
- (c) The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefor to the DBE by the Contractor, but not later than thirty (30) calendar days after payment has been made by the Department to the Contractor for such work or material without regard to any retainage withheld by the Department, the Contractor shall submit a DBE Payment Report on Department form SBE 2115 to the District Engineer. If full and final payment has not been made to the DBE, the Report shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Plan, the Department will deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages.
- (d) The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

80029

PAVEMENT THICKNESS DETERMINATION FOR PAYMENT (BDE)

Effective: April 1, 1999

Revised: August 1, 2000

Description. This work shall consist of determining pavement thickness for payment for full depth bituminous concrete and all pcc pavements.

Materials. Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitious Materials For Concrete Repairs. Coarse aggregate may be added to the mortar if allowed by the manufacturer's instructions on the package. Mixing shall be according to the manufacture's recommendations.

Equipment. Cores shall be taken utilizing an approved coring machine. The cores shall have a diameter of 50 mm (2 inches). The cores shall be measured utilizing an approved measuring device.

CONSTRUCTION REQUIREMENTS

Tolerance in Thickness. Determination of the pavement thickness shall be performed after the pavement surface tests and all corrective grinding are complete according to Article 407.09 of the Standard Specifications. Adjustments made in the contract unit price for pavement thickness will be in addition to and independent of those made for the Profile Index.

The pavement will be divided into lots of not more than 1500 m (5000 ft.) in length. When the length of a continuous strip of pavement is less than 1500 m (5000 ft.), these short lengths of pavement, ramps, turn lanes, and other short sections of continuous pavement shall be grouped together to form lots of approximately 5500 square meters (6500 sq. yds.). Short segments between structures will be measured continuously with the structure segments omitted. Each lot will be subdivided into 10 equal sublots. The width of a subplot and lot will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.

Fifty millimeter (two inch) cores shall be taken from the pavement by the Contractor at random locations selected by the Engineer. When computing the thickness of a lot, 1 core will be taken per subplot. Core locations will be specified by the Engineer prior to beginning the coring operations.

The Contractor and the Engineer shall witness the coring operations, the measurement, and recording of the cores. Core measurements will be determined immediately upon removal from the core bit and prior to moving to the next core location. Upon concurrence of the length, the core samples may be discarded.

Patching Holes. Upon completion of coring, all core holes shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent pavement.

For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume; or a packaged rapid set mortar shall be used. For a rapid set concrete mixture, a packaged rapid set mortar shall be combined with coarse aggregate according to the manufacturer's instructions or a packaged rapid set concrete shall be used. Mixing of a rapid set mortar or concrete shall be according to the manufacturer's instructions.

Deficient Core. When the thickness of the core in a subplot is deficient by more than 10% of plan thickness, the Contractor will have the option of taking 3 additional cores selected at random by the Engineer within the same subplot at the Contractor's expense. The thickness of the additional 3 cores will be averaged with the original core thickness. When the average thickness shows the subplot to be deficient by 10% or less, no additional action is necessary. If the Contractor chooses not to take additional cores, the pavement in the subplot shall be removed and replaced at the Contractor's expense. When additional cores are taken and the average thickness of the additional cores show the subplot to be deficient by more than 10%, the pavement in that subplot shall be removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. For Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material thickness(es), areas to be overlaid, and method of placement used for additional lift(s) will be approved by the Engineer. When the thin pavement is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin pavement is left in place and no additional lift(s) are placed, no payment will be made for the deficient pavement subplot. The thickness of the original core taken in the subplot will be used in determining the payment for the entire lot and no adjustment to the pay factor will be made for any corrective action taken.

Deficient Lot. After analyzing the cores, the Percent Within Limits will be calculated. A lot of pavement represented by the Percent Within Limits (PWL) of 60% or less, shall be removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such pavement to remain in place. For Bituminous Concrete Pavement (Full Depth), allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement used for the additional lift(s) will be approved by the Engineer. After either corrective action, the Contractor shall core the lot according to the "Coring Procedures" at no additional cost to the Department. The PWL will then be recalculated for the lot, however, the pay factor for the lot will be a maximum of 100%. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing, the lot to remain in place. When the lot is left in place and no additional lifts are placed the pay factor for the lot will be based on the calculated PWL.

Right of Discovery. When the Engineer has reason to believe the random core selection process will not accurately represent the true conditions of the work, he/she may order cores in addition to those specified. The additional cores shall be taken at specific locations determined by the Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action. These additional cores and locations will be determined prior to commencement of coring operations. When the additional cores show the pavement to be deficient by more than 10%, additional cores shall be taken at locations determined by the Engineer to determine the limits of the deficient pavement area. The deficient pavement area will be defined as the area between two acceptable cores. An acceptable core is a core with a thickness of 90% or more of plan thickness. The defined pavement area shall be removed and replaced at the Contractor's expense. When requested by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. On Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed to bring the deficient pavement to plan thickness when the Engineer determines that grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement for the additional lift(s) will be approved by the Engineer. When the thin pavement

is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin pavement is left in place and no additional lift(s) are placed, no payment will be made for the deficient pavement. When the additional cores show the pavement to be deficient by 10% or less the additional cores will be paid for according to Article 109.04. When the additional cores show the pavement to be deficient by more than 10% the additional cores taken in the deficient area shall be at the Contractor's expense.

Profile Index Adjustment. After any section of pavement is removed and replaced or any additional lifts are added, the corrected areas shall be tested for pavement smoothness and any necessary Profile Index adjustments and/or corrections will be made based on these final profile readings. Such surface testing shall be performed at the Contractor's expense.

Core Analysis. Cores will be analyzed according to the following:

(a) Definition:

x_i = Individual values (core lengths) under consideration

n = Number of individual values under consideration
(10 per lot)

\bar{x} = Average of the values under consideration

LSL = Lower Specification Limit (LSL = 0.98 plan thickness for pavement)

Q_L = Lower Quality Index

S = Sample Standard Deviation

PWL = Percent Within Limits

Σ = $(x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \dots + (x_{10} - \bar{x})^2$

Determine \bar{x} for the lot to the nearest two decimal places.

Compute the sample standard deviation to the nearest three decimal places using:

$$S = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n - 1}}$$

Determine the Lower Quality Index to the nearest two decimal places using:

$$Q_L = \frac{(\bar{x} - LSL)}{S}$$

Determine the percentage that will fall above the Lower Specification Limit (LSL) by going to the attached Table and utilizing calculated Q_L . Read the appropriate PWL value from the Table. For Q_L values less than zero the value shown in the table must be subtracted from 100 to obtain PWL.

Pay Adjustment. The following pay adjustment equation will be used to determine (to the nearest two decimal places) the pay factor for each lot.

Pay Factor (%) = 55 + 0.5 (PWL)

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If \bar{x} for a lot is less than the plan thickness, the maximum pay factor for that lot will be 100%.

Total Payment. The payment will be based on the appropriate pay items in Sections 407, 420, and 421. The final payment will be adjusted according to the following equation:

$$\text{Total Payment} = \text{PF}[\text{CUP} (\text{SQMPAVT} - \text{DEFPAVT})]$$

PF = Total Pay Factor

CUP = Contract Unit Price

SQMPAVT = Square Meters of Pavement Placed

DEFPAVT = Square Meters of Deficient Pavement

The total pay factor for the entire pavement will be the average of all the lots, however, not more than 102% of plan quantity will be paid.

All work involved in determining the total payment will be included in the contract unit prices of the pay items involved.

53600

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FAI Route 57
Section 77-(1,2)RS-2
Pulaski County

Percent Within Limits

Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)
0.00	50.00	.040	65.07	0.80	78.43	1.20	88.76	1.60	95.46	2.00	98.83	2.40	99.89
0.01	50.38	0.41	65.43	0.81	78.72	1.21	88.97	1.61	95.58	2.01	98.88	2.41	99.90
0.02	50.77	0.42	65.79	0.82	79.02	1.22	89.17	1.62	95.70	2.02	98.92	2.42	99.91
0.03	51.15	0.43	66.15	0.83	79.31	1.23	89.38	1.63	95.81	2.03	98.97	2.43	99.91
0.04	51.54	0.44	66.51	0.84	79.61	1.24	89.58	1.64	95.93	2.04	99.01	2.44	99.92
0.05	51.92	0.45	66.87	0.85	79.90	1.25	89.79	1.65	96.05	2.05	99.06	2.45	99.93
0.06	52.30	0.46	67.22	0.86	80.19	1.26	89.99	1.66	96.16	2.06	99.10	2.46	99.94
0.07	52.69	0.47	67.57	0.87	80.47	1.27	90.19	1.67	96.27	2.07	99.14	2.47	99.94
0.08	53.07	0.48	67.93	0.88	80.76	1.28	90.38	1.68	96.37	2.08	99.18	2.48	99.95
0.09	53.46	0.49	68.28	0.89	81.04	1.29	90.58	1.69	96.48	2.09	99.22	2.49	99.95
0.10	53.84	0.50	68.63	0.90	81.33	1.30	90.78	1.70	96.59	2.10	99.26	2.50	99.96
0.11	54.22	0.51	68.98	0.91	81.61	1.31	90.96	1.71	96.69	2.11	99.29	2.51	99.96
0.12	54.60	0.52	69.32	0.92	81.88	1.32	91.15	1.72	96.78	2.12	99.32	2.52	99.97
0.13	54.99	0.53	69.67	0.93	82.16	1.33	91.33	1.73	96.88	2.13	99.36	2.53	99.97
0.14	55.37	0.54	70.01	0.94	82.43	1.34	91.52	1.74	96.97	2.14	99.39	2.54	99.98
0.15	55.75	0.55	70.36	0.95	82.71	1.35	91.70	1.75	97.07	2.15	99.42	2.55	99.98
0.16	56.13	0.56	70.70	0.96	82.97	1.36	91.87	1.76	97.16	2.16	99.45	2.56	99.98
0.17	56.51	0.57	71.04	0.97	83.24	1.37	92.04	1.77	97.25	2.17	99.48	2.57	99.98
0.18	56.89	0.58	71.38	0.98	83.50	1.38	92.22	1.78	97.33	2.18	99.50	2.58	99.99
0.19	57.27	0.59	71.72	0.99	83.77	1.39	92.39	1.79	97.42	2.19	99.53	2.59	99.99
0.20	57.65	0.60	72.06	1.00	84.03	1.40	92.56	1.80	97.51	2.20	99.56	2.60	99.99
0.21	58.03	0.61	72.39	1.01	84.28	1.41	92.72	1.81	97.59	2.21	99.58	2.61	99.99
0.22	58.40	0.62	72.72	1.02	84.53	1.42	92.88	1.82	97.67	2.22	99.61	2.62	99.99
0.23	58.78	0.63	73.06	1.03	84.79	1.43	93.05	1.83	97.75	2.23	99.63	2.63	100.00
0.24	59.15	0.64	73.39	1.04	85.04	1.44	93.21	1.84	97.83	2.22	99.66	2.64	100.00
0.25	59.53	0.65	73.72	1.05	85.29	1.45	93.37	1.85	97.91	2.25	99.68	≥ 2.65	100.00
0.26	59.90	0.66	74.04	1.06	85.53	1.46	93.52	1.86	97.98	2.26	99.70		
0.27	60.28	0.67	74.36	1.07	85.77	1.47	93.67	1.87	98.05	2.27	99.72		
0.28	60.65	0.68	74.69	1.08	86.02	1.48	93.83	1.88	98.11	2.28	99.73		
0.29	61.03	0.69	75.01	1.09	86.26	1.49	93.98	1.89	98.18	2.29	99.75		
0.30	61.40	0.70	75.33	1.10	86.50	1.50	94.13	1.90	98.25	2.30	99.77		
0.31	61.77	0.71	75.64	1.11	86.73	1.51	94.27	1.91	98.31	2.31	99.78		
0.32	62.14	0.72	75.96	1.12	86.96	1.52	94.41	1.92	98.37	2.32	99.80		
0.33	62.51	0.73	76.27	1.13	87.20	1.53	94.54	1.93	98.44	2.33	99.81		
0.34	62.88	0.74	76.59	1.14	87.43	1.54	94.68	1.94	98.50	2.34	99.83		
0.35	63.25	0.75	76.90	1.15	87.66	1.55	94.82	1.95	98.56	2.35	99.84		
0.36	63.61	0.76	77.21	1.16	87.88	1.56	94.95	1.96	98.61	2.36	99.85		
0.37	63.98	0.77	77.51	1.17	88.10	1.57	95.08	1.97	98.67	2.37	99.86		
0.38	64.34	0.78	77.82	1.18	88.32	1.58	95.20	1.98	98.72	2.38	99.87		
0.39	64.71	0.79	78.12	1.19	88.54	1.59	95.33	1.99	98.78	2.39	99.88		

*For Q values less than zero, subtract the table value from 100 to obtain PWL

STORM WATER POLLUTION PREVENTION PLAN

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4 and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. Employ convict labor for any purpose within the limits of

the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above

agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.
- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
- c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any

evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to

the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the

contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or

disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not

be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the

Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall, upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan

or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period).

The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V.

This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
- (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
- (3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for

inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a

whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract.

Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification,

distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of

any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled

"Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion-Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.